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TEACHERS FOR OUR SCHOOLS

CONTENTS

EDITORIAL 2

THE 1953 TEACHER SUPPLY AND DEMAND REPORT 3

THE OUTLOOK FOR SCHOOL ENROLLMENTS 46

TEACHER FORECAST FOR THE PUBLIC SCHOOLS 53

THE SHORTAGE OF SPECIAL CLASS TEACHERS IN LARGE CITIES, *Sidney H. Firestone and Jacob S. Orleans* 59

WITH THE RESEACHERS, *Douglas E. Scates, Editor*

EVALUATIVE STUDIES IN TEACHER EDUCATION, *A. S. Barr and Arthur Singer, Jr.* 65

AN ANNOTATED BIBLIOGRAPHY ON TEACHER RECRUITMENT, SUPPLY, AND DEMAND, *R. H. Eliassen* 73

HIGH SCHOOL COURSES FOR FUTURE TEACHERS, *Katherine Stapp* 77

BROWSING THROUGH THE BOOKSHELVES, *Dorothy McCuskey, Editor* 79

THE CORNELL UNIVERSITY PROGRAM IN ELEMENTARY TEACHER EDUCATION, *Claude L. Kulp* 84

WHAT'S HAPPENING IN TEACHER EDUCATION 85

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EDITORIAL

Teachers for Our Schools

THIS ISSUE of the JOURNAL presents the 1953 study of teacher supply and demand in the United States. Heretofore the annual study has been published in a separate volume. Included in this issue, also, are articles dealing with pressing phases of the problem of staffing the nation's schools with competent teachers. Special efforts have been made to include discussions which would be helpful to local school systems, local recruiting committees, state departments of education, and teacher-education institutions in planning for the future. The 1953 report indicates a decided worsening of the teacher-supply situation.

There are many viewpoints concerning effective means of solving the teacher shortage. Some people are advocating what amounts to a return to the old Lancastrian System of teaching, through provision of nonprofessional teaching helpers which, they say, would enable each qualified teacher to teach several times as many children as are now considered a reasonable teaching load. It has been suggested that a national system of scholarships for education students be sought. The most frequently mentioned proposal is that standards of preparation for beginning teachers be lowered as a means of increasing the supply. There are even proposals to dispense with teacher preparation as such.

There is doubtless some merit in most of these proposals, and perhaps some aspects of each can be used to ease the present situation. But as solutions to the problem, all appear to be nothing more than palliatives. None of them offers a solid, long-range answer to the problem. Does not the problem come down to the proposition of the true value that the American people place upon their schools and the consequent status which they are willing to accord and to support for teaching as a profession? The shortage is not so much one of qualified people but of qualified people willing to teach under existing conditions.

It is frequently said that the schools cannot possibly get the needed number of new teachers from the annual crop of college graduates. This statement, which is being used to buttress some of the proposals listed above, obscures some fundamental facts. In the first place, only about one-half of the states are now requiring degree teachers for the elementary schools. In the second place, the number of new teachers needed each year could be cut in half if conditions were stabilized so that the annual leaving rate of qualified teachers could be reduced to approximately that of the more respected professions. In the third place, an adequate flow of qualified teachers revolves around the proposition of providing as attractive inducements for teaching as for other professional endeavors.

It is seriously to be doubted whether the casual regard which the public has accorded to the work of teachers will suffice. Certainly their current economic status cannot do so. As serious, is the current bulldozing and villification of teachers and schools by certain groups of Americans. The fundamental decision which the American people must make is whether, in truth, their system of education is the key to the survival and progress of a free society; and whether teachers shall be given the economic and social prestige status in harmony with that concept. The Commission consistently has held to the view that a stable profession of teaching, one that has dignity and respect, one with great appeal for young people of high caliber, can only eventuate from high standards all along the line. Any other approach simply places teaching in an inferior competitive position with other professions.

The solution of the teacher-supply problem is not an easy one. There are no panaceas, and it would be a serious mistake to assume so. With a new and favorable perspective by the American people, the supply will develop; without such a decision, the present imbalance will become grave indeed.

P.R.E.

THE 1953 TEACHER SUPPLY AND DEMAND REPORT

Prepared by the

NEA Research Division

At the Request of
The National Commission on Teacher Education and Professional Standards

THE number of children of school age in the United States continues to expand at an unprecedented rate. Each September for the next six years will find one million more youngsters crowding into the elementary schools than were present the preceding year. If the annual birth rate, which reached an all-time high of approximately four million in 1952, does not show a marked drop, the annual increase in the number of children of elementary school age will continue well beyond 1958.

The high school age group, static for the last decade, showed its first modest upturn in 1952. By 1955 the increase will be pronounced; by 1960 the total enrollment in the high schools may be expected to be 50 per cent greater than in 1950.

These figures, startling as they are, have been widely publicized. The public has been repeatedly advised that the American school system is rapidly moving into a new era. The facts have been literally shouted from the housetops. Not only teachers but a growing number of interested groups of lay citizens are calling attention to the changing conditions.

Yet scarcely anywhere is there evidence of adequate steps being taken to meet this crisis. In terms of (1) vastly expanded budgets, (2) aggressive building programs, and (3) greatly increased numbers of available, adequately prepared teachers, the challenge still lies directly before us. We, as a nation, have hardly come to grips with the task of supplying even the minimum needs of the American educational system. Available resources do not adequately meet the needs of the moment; far greater resources are required to surmount the obstacles just ahead. The task must be measured in terms not yet understood by a public already confused by the growing competition for the tax dollar.

"The 1953 Teacher Supply and Demand Report" is the sixth in the annual series of national studies of teacher supply and demand in the United States which has been conducted under the sponsorship of the National Commission on Teacher Education and Professional Standards. The 1953 report was prepared by the NEA Research Division in cooperation with the Commission. The 1953 study, as has been the case with each of the preceding ones, was under the immediate supervision of Ray C. Maul. Mr. Maul is Assistant Director of the NEA Research Division. The Commission expresses appreciation to the Research Division and to Mr. Maul for their cooperation in the preparation of this important report.

The 1953 report is published exclusively in the Journal of Teacher Education.

Purpose of This Report

The investigation reported here is limited to the supply of and demand for teachers at the elementary and high school levels; it is not concerned with either the financing of the schools or the construction of needed housing units, except to recognize that the three are closely interrelated. In particular, this study seeks (1) to explore the

sources of supply of qualified candidates to teach in the elementary schools and the various subject-matter fields in the high schools, (2) to measure the demand for teachers in each of these areas in September, 1952, as demand was indicated by the employment of new teachers, and (3) to discover the extent to which the elementary school teaching corps of the nation is professionally prepared, in terms of college semester hours of credit. This third phase of the study, which shows the need for adequately prepared teachers to replace those lacking such preparation, is limited to the elementary schools. Practically all high school teachers now in service are professionally prepared according to existing requirements. In the elementary schools, however, the lack of formal preparation of teachers is a major handicap.

Method of Procedure

Since its origin this annual study has been a cooperative enterprise. It involves, in a firsthand way, the state director of teacher education (or his counterpart) in each of the 48 state departments of education and the participating territories. Also, each of these state department officials depends upon the active support of the appropriate person in each of the higher institutions engaged in preparing teachers in his state. This network is the channel through which comes the complete report on the supply of teachers. Readers of this report will recognize the vital role played by each of these many contributors. Major credit is due the official in each state department who carries this added load during a busy season. He not only correlates the "supply" reports flowing to him from the colleges, but he also carries major responsibility for his state's participation in the study of the "demand" and the "analysis of preparation" sections. Whatever merit the national report possesses is due to the professional zeal of this cooperative group.

In seeking to measure the available supply of candidates, three main sources come into view. First, and the only one susceptible of measurement, is the annual flow of graduates from the colleges and universities who will, at the end of the academic year, conclude programs of study entitling them to standard certificates according to the regulations of the state in which the college is located. This, the major source of new supply, is the one annually reported in this investigation. The second source consists of persons not now teaching who at some previous date qualified for standard certificates and are still eligible to enter candidacy for positions. The third source of supply of teaching candidates consists of such heterogeneous groups as may be able to meet the requirements of state certificating authorities for some type of nonstandard "emergency" license, or permit. Only the first of these three sources of supply is explored in this study, since it does not seem possible to determine in the early months of the year how many persons in either of the other two categories may decide to enter candidacy for teaching positions the following September. It seems both practical and useful, however, to investigate and report the size and make-up of the 1953 graduating class, because it is to this group that local employing authorities will look first for candidates as their needs for September, 1953 become known.

The cooperation of state and college authorities has made possible the preparation of the following "supply" tables, based on a report from every one of the higher institutions in the nation in which a student may earn credits entitling him to the standard teaching certificate. It must be noted here, however, that it is not possible for the cooperating college authorities to prepare a completely accurate report before the end of the academic year. The figures portraying "supply" to become available in September, 1953 must therefore be subject to a recheck after the beginning of the 1953-54 school year.

Table I presents not only the number of 1953 graduates who are expected to qualify for teaching certificates, but

also a recheck of the number who did qualify in 1952, and who were first reported a year ago.

This report is planned so that these important facts may be made available to local superintendents and boards of education at the time they are engaged in seeking candidates and filling vacancies. Employing officials will, of course, recognize that these data were assembled on college campuses in December, and this report is made available early in March in a specific effort to help them see more clearly the make-up of this new group of prospective candidates. In interpreting these reports of supply, however, it must be kept constantly in mind that many of these 1953 college graduates, although they meet certificate requirements, will not become active candidates for teaching positions. The many competing phases of occupational life in America must be understood, as they limit the meaning of "supply" figures. The records of each college are perhaps the best indication of the per cent of graduates eligible to teach who will seek teaching positions.

Part I
The Supply of Teachers

1. The Supply of Elementary School Teachers. The numbers of qualified candidates for elementary school teaching to come from the colleges during the spring and summer of 1953 are shown at four levels in the following table because the states issue standard certificates for teaching in the grades, as follows: 21 states and the District of Columbia and Hawaii require four years (Hawaii requires five years) of college preparation for the standard certificate; six states and Alaska require three years; 13 states require two years; eight states require one year or less.[1]

Without question, the critical figure is the one indicating the number of four-year trained elementary school candidates to be produced by the colleges in 1953. Table I shows that this number is 35,636, of whom 6,052 (17 per cent) are men and 29,548 (83 per cent) are women. The 1953 group will be 5.35 per cent smaller than the 37,649 college graduates in 1952 who became eligible for employment last September. In the brackets of three-, two-, and one-year trained candidates, the numbers to be produced in 1953 are also less than those produced in 1952. The current group of these persons to become eligible to these standard certificates below the bachelor's-degree level totals 10,075; last year this group totaled 11,104.

What Do Supply Figures Mean?

Disregarding the steadily expanding need for new elementary school teachers there is grave doubt that even replacement demands can be met by the 1953 production of 45,711 candidates, which is the sum of the degree and non-degree groups just described. It becomes necessary, therefore, to weigh two conflicting factors in the effort to sharpen the meaning of the available "supply" figures.

On the positive side, it seems fair to say that the figure 45,711 does not represent the *absolute limit* of college production in 1953. During the past five years college authorities have been reporting "supply" in this annual national investigation. Each year the procedures have been improved for identifying and classifying students

[1] States requiring four years' preparation are Arizona, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Louisiana, Maryland, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, and Washington. States requiring three years are Alabama, Idaho, Maine, Massachusetts, Oklahoma, and Oregon (and Alaska). States requiring two years are Colorado, Iowa, Kansas, Kentucky, Minnesota, Montana, Nevada, New Mexico, South Carolina, Tennessee, West Virginia, Wisconsin, and Wyoming. States requiring one year or less are Arkansas, Michigan, Mississippi, Missouri, Nebraska, North Dakota, South Dakota, and Texas. (Effective September 1, 1953, Kentucky, South Carolina, and Tennessee will require four years of preparation for the standard elementary certificate.)

Source: Armstrong, W. Earl, and Stinnett, T. M. *Manual on Certification Requirements for School Personnel in the United States.* 1953 edition. U.S. Government Printing Office. Washington, D. C.

who, at the end of the academic year, would meet certificate requirements. Instructions to participating colleges regularly have stressed the desirability of reporting only those students who could be so identified and classified (in December, when the data are assembled). The annual recheck, made after the academic year is ended, shows a lag of about 10 per cent in accounting for all those students who will meet standard certificate requirements in time to enter teaching service in September. On the basis of this experience, therefore, it now seems fair to assume that the final count of degree recipients who qualify for the standard certificate will be about 10 per cent more than the number indicated in this report when it is issued early in the spring.

Again, it must be recognized that it is more difficult, on most college campuses, to identify a student in December who will complete a 90-, 60-, or 30-hour certificate program than it is to identify the degree student. Also, in some of the 27 states issuing below-degree certificates, it may be possible for students to take, during the second semester or summer session, the required professional courses for these standard elementary school certificates. Such students may not have been on campus in December. Others, although regularly enrolled, may not intend to qualify but decide later to do so, and thus would not be identified in the most careful canvass of the student body.

Also on the positive side, it must be recognized that an unknown number of college students (seniors in all states and others in the 27 states mentioned above) come to the end of the academic year (June) *and then decide* to take such courses in the summer session as are necessary to qualify for such type of nonstandard "emergency" certificate as may be available in the state in which they desire to teach.

Still another positive factor is the fact that, in some states, a considerable number of the 1953 degree candidates who are classified in the high school "supply" because they have followed an undergraduate program of concentration in a subject-matter field *are also recognized* as qualified elementary school teachers. The popularly called "single-curriculum" has been most extensively developed in the State of Washington. Several other states are also exploring its possible advantages and its contribution to the reduction of the imbalance between the available supply of qualified elementary and high school teachers. In nearly all of the states the college students majoring in art, music, or physical and health education may be considered as a part of the potential elementary school supply. The fact remains, however, that most of these graduates, if they are interested in teaching, will first explore and exhaust the possibilities of obtaining high school positions before entering candidacy for assignments in the elementary school.

Finally, it must be recognized that "supply" will be drawn from (1) those holding valid certificates who did not teach the preceding year, and (2) those who taught the preceding year *on emergency certificates* automatically expiring but who will earn a standard or another emergency certificate through summer attendance.

The negative side of the "supply" picture contains a number of factors which may more than offset the possible gains just described. First, it is known that many but an unmeasured number of the "supply" reported by the colleges in December *will not even wish to enter candidacy* for teaching jobs, even after completing all of the requirements for the certificate (degree or otherwise). Some 84 per cent of the 1953 elementary school potential candidates being women, marriage may be expected to claim a large number of the spring graduates. Also, in these times of plentiful employment, the competition for college graduates may be expected to cut deeply into the ranks of an eligible class. At this point it must be recognized as a factor in teacher supply that the strengthening of the teacher education curriculum through the growing insistence upon a well-rounded general

education background—desirable as it is for every teacher of every grade and every subject—enhances the eligibility of these college graduates for nonteaching occupations.

Again on the negative side, graduate work claims a considerable portion of each graduating class. Advancing standards, pointing ultimately to the fifth year for standard elementary and high school certificate and toward the sixth or seventh year for administrative and supervisory service, as well as the growing attractiveness of opportunities outside education for holders of advanced degrees, tend further to reduce the apparent available supply.

And, finally, it must be recognized that the call to military service cuts deeply into the ranks of male college graduates who might otherwise enter immediate candidacy for teaching positions. With the definite prospect of two years of military service facing every able-bodied young man, and with the elementary school teaching corps already sadly in need of many more men to establish a desirable balance between sexes, one may well ask, "Whence will come our future superintendents, principals, supervisors, college instructors and administrators, and state school officials who should have the rich background of firsthand teaching experience desirable at all levels?" Any further diminution of the small per cent of men now in elementary school service is cause for concern.

2. The Supply of High School Teachers. The total number of college graduates qualifying for standard high school teaching certificates has decreased sharply since the all-time high three years ago. In 1950 the total was 86,890; in 1951 it was 73,015; in 1952 it was 61,510. In 1953 it is indicated to be 55,468. While this total number seems, on the surface, to be satisfactory,

TABLE I

TOTAL NUMBER OF COLLEGE AND UNIVERSITY STUDENTS COMPLETING CERTIFICATE REQUIREMENTS, ACCORDING TO REGULATIONS OF EACH OF THE 48 STATES, ALASKA, DISTRICT OF COLUMBIA, AND HAWAII, BY SEX, IN 1953, COMPARED TO THE NUMBER WHO MET SUCH REQUIREMENTS IN 1952

Type of Preparation	1953			1952 Total	1952 to 1953	
	Men	Women	Total		Net Change	Per Cent Change
Elementary School Teaching:						
120 Semester hours	6,052	29,584	35,636	37,649	−2,013	−5.35
90 Semester hours	206	1,418	1,624	1,689	−65	−3.85
60 Semester hours	812	6,297	7,109	8,123	−1,014	−12.48
30 Semester hours	219	1,123	1,342	1,292	+50	+3.87
Elementary Total	7,289	38,422	45,711	48,753	−3,042	−6.24
High School Teaching:						
Agriculture	1,754	3	1,757	1,891	−134	−7.09
Art	708	1,290	1,998	2,249	−251	−11.16
Commerce	1,950	2,626	4,576	5,165	−589	−11.40
English	1,832	3,742	5,574	6,585	−1,011	−15.35
Foreign Language	559	1,135	1,694	1,859	−165	−8.88
Home Economics	7	4,311	4,318	4,648	−330	−7.10
Industrial Arts	2,467	160	2,627	3,161	−534	−16.89
Journalism	55	63	118	122	−4	−3.28
Library Science	88	366	454	456	−2	−.44
Mathematics	1,790	920	2,710	3,142	−432	−13.75
Music	2,079	2,647	4,726	4,882	−156	−3.20
Physical Ed. (Men)	5,680	—	5,680	6,546	−866	−13.23
Physical Ed. (Women)	—	2,586	2,586	2,607	−21	−.81
General Science	1,319	477	1,796	2,216	−420	−18.95
Biology	1,213	617	1,830	1,995	−165	−8.27
Chemistry	556	166	722	842	−120	−14.25
Physics	278	39	317	373	−56	−15.01
Social Sciences	5,487	2,888	8,375	9,406	−1,031	−10.96
Speech	531	827	1,358	1,504	−146	−9.71
Other	1,241	1,011	2,252	1,861	+391	+21.01
High School Total	29,594	25,874	55,468	61,510	−6,042	−9.82
GRAND TOTAL	36,883	64,296	101,179	110,263	−9,084	−8.24

Read table thus: ***Under Elementary*** in 1953 a total of 6,052 men and 29,584 women college students will complete programs of 120 semester hours preparation for elementary school teaching. In 1952 a total of 37,649 college students completed identical programs of preparation. . . . ***Under High School*** in 1953, a total of 1,754 men and 3 women will complete programs of preparation for the teaching of agriculture as a major subject. In 1952 a total of 1,891 college students completed identical programs of preparation.

there are at least six specific factors giving rise to concern. In fact, the whole problem of supply of high school teachers must be reexamined in the light of rapidly changing conditions.

The first fact to be noted is the sharp drop in the total number of college graduates who indicate sufficient interest in high school teaching to qualify for the certificate. The decline in this number since 1950 is more than one-third of that year's total.

Second, increasing competition for highly trained manpower in many phases of American life may be expected to claim a larger proportion of the 1953 graduating college class than in recent years. Third, the imbalance in the distribution of the total number among the subject-matter fields continues. Fourth, the June 1953 military call may drastically reduce the number of men who would ordinarily enter high school teaching service immediately after graduation. This latter factor itself may induce an immediate shortage in several fields; it might easily create a critical shortage of teachers in such fields as agriculture, industrial arts, and men's health and physical education, where the teaching load is not shared by women. Almost certainly, also, this factor will sharpen the demand for men to teach all subjects.

Fifth, the marked decrease in the number of women indicating an interest in high school teaching may well convert the apparent oversupply in some fields into a general shortage all along the line.

Sixth, improved conditions in elementary school teaching in certain states have tended to attract some high school candidates in fields of temporary oversupply who would otherwise have been converted for service in other high school fields.

In Part II of this report the actual demand for teachers, as that demand was met in 26 states, Alaska, the District of Columbia, and Hawaii, last September by the employment of new teachers, is compared with the number of 1952 qualified candidates in each of the reporting states. A careful analysis of those data leads inevitably to the conclusion that the teacher shortage, generally confined in recent years to the elementary school field, may soon become more complex. The war-time shortage of high school teachers in all fields, which has continued without even momentary relief in such fields as home economics, library service, and women's health and physical education, may return.

The State-by-State Supply Situation

Table I shows only the over-all national picture. In Table II the 1953 degree candidates are reported separately by state and by sex. (It should be noted that the 90-, 60-, and 30-hour certificate candidates are not included in Table II.) The number to be graduated in 1953 in each state is compared with the number who did graduate in that state in 1952. The state totals, with the net and the percentage changes from 1952 to 1953, are shown separately for elementary and high school candidates.

While there is wide fluctuation in the size of college graduating classes in recent years, it is worthy of note that the production of degree candidates for elementary school teaching *falls less than* the drop in candidates for high school teaching. The elementary school promises to decrease 5.35 per cent in 1953, while the indicated decrease in the high school group is 9.82 per cent. A year ago the elementary school decrease from the previous year was indicated as 3.96 per cent, while the high school decrease was 14.14 per cent. The year 1950 marked the greatest total number of college graduates and the greatest number of degree candidates for teaching certificates, when both elementary and high school are combined. Comparative figures prior to that date are not available, but complete "supply of teachers" reports from the colleges since that date have shown a steady tendency to reduce the numerical imbalance between elementary and high school candidates. The purpose of Table II is to show the state-by-state totals and the most recent change in the production

TABLE II

TOTAL NUMBER OF COLLEGE AND UNIVERSITY DEGREE CANDIDATES, BY SEX AND BY STATE, WHO ARE COMPLETING CERTIFICATE REQUIREMENTS IN EACH STATE IN 1953, AND NET CHANGE FROM 1952
(THIS TABLE DOES NOT INCLUDE STUDENTS MEETING CERTIFICATE REQUIREMENTS AT 90-, 60-, OR 30-HOUR LEVELS)

State	Elementary School Teaching					High School Teaching				
	Graduates of 1953			1952 to 1953		Graduates of 1953			1952 to 1953	
	Men	Women	Total	Net Change	Per Cent Change	Men	Women	Total	Net Change	Per Cent Change
Alabama (White)	23	302	325	−388	54.42	389	431	820	−303	26.98
Alabama (Negro)	43	589	632	+59	10.30	250	362	612	+90	17.24
Alaska	2	2	4	+3	300.00	—	2	2	+2	200.00
Arizona	101	279	380	−12	3.06	200	112	312	+26	9.09
Arkansas	61	524	585	−74	11.23	506	465	971	−74	7.08
California	839	2,871	3,710	−435	10.49	1,697	1,394	3,091	+25	.82
Colorado	79	405	484	−174	26.44	425	307	732	−507	40.92
Connecticut	119	312	431	+55	14.63	260	163	423	−12	2.76
Delaware (White)	4	51	55	+6	12.24	18	35	53	−2	3.64
Delaware (Negro)	2	6	8	+3	60.00	10	2	12	−9	42.86
Dist. of Col. (White)	6	50	56	+18	47.37	61	31	92	−31	25.20
Dist. of Col. (Negro)	4	37	41	−10	19.61	29	58	87	−3	3.33
Florida	87	651	738	−92	11.08	561	405	966	+37	3.98
Georgia (White)	28	278	306	−297	49.25	217	305	522	−48	8.42
Georgia (Neg o)	21	295	316	−100	24.04	196	168	364	−66	15.35
Hawaii	6	95	101	+23	29.49	18	31	49	+9	22.50
Idaho	13	77	90	+5	5.88	142	82	224	−51	18.55
Illinois	397	1,699	2,096	+133	6.78	1,603	1,205	2,808	−248	8.12
Indiana	132	685	817	+55	7.22	1,049	771	1,820	−151	7.66
Iowa	31	301	332	−119	26.39	842	617	1,459	−268	15.52
Kansas	60	336	396	−14	3.41	528	424	952	−191	16.71
Kentucky	76	449	525	+49	10.29	567	450	1,017	−109	9.68
Louisiana (White)	66	401	467	−64	12.05	475	317	792	−182	18.69
Louisiana (Negro)	84	262	346	−73	17.42	134	129	263	−59	18.32
Maine	73	167	240	+38	18.81	197	135	332	+65	24.34
Maryland	59	311	370	+35	10.45	296	240	536	+21	4.08
Massachusetts	190	1,113	1,303	+45	3.58	878	811	1,689	−145	7.91
Michigan	315	1,732	2,047	+62	3.12	1,254	881	2,135	−35	1.61
Minnesota	68	342	410	−154	27.30	829	697	1,526	−85	5.28
Mississippi	14	198	212	−133	38.55	389	555	944	−84	8.17
Missouri	80	660	740	−207	21.86	582	455	1,037	−81	7.25
Montana	34	50	84	−17	16.83	140	95	235	−24	9.27
Nebraska	35	257	292	−39	11.78	390	256	646	−132	16.97
Nevada	8	40	48	−7	12.73	14	11	25	+7	38.89
New Hampshire	30	67	97	−11	10.19	75	55	130	−28	17.72
New Jersey	110	477	587	+53	9.93	410	417	827	−59	6.66
New Mexico	49	135	184	−33	15.21	227	101	328	−66	16.75
New York	926	3,999	4,925	+459	10.28	1,889	2,046	3,935	−580	12.85
North Carolina (White)	34	594	628	+4	.64	550	661	1,211	−123	9.22
North Carolina (Negro)	80	369	449	+23	5.40	252	348	600	−33	5.21
North Dakota	13	46	59	0	0.00	182	168	350	+29	9.03
Ohio	112	1,222	1,334	−60	4.30	1,487	1,436	2,923	−286	8.91
Oklahoma	151	625	776	−56	6.73	753	621	1,374	−117	7.85
Oregon	225	270	495	+11	2.27	310	240	550	+59	12.02
Pennsylvania	277	1,120	1,397	−292	17.29	1,943	1,656	3,599	−523	12.69
Rhode Island	7	75	82	+10	13.89	109	43	152	−21	12.14
South Carolina (White)	12	208	220	+73	49.66	222	324	546	+91	20.00
South Carolina (Negro)	13	252	265	+78	41.71	160	169	329	+107	48.20
South Dakota	22	54	76	−55	41.98	251	148	399	−41	9.32
Tennessee	93	517	610	−30	4.69	913	968	1,881	−63	3.24
Texas (White)	109	1,156	1,265	−87	6.43	1,804	1,509	3,313	−1,044	23.96
Texas (Negro)	38	156	194	−12	5.83	327	441	768	−87	10.18
Utah	119	427	546	+9	1.68	331	155	486	−79	13.98
Vermont	42	126	168	+45	36.59	46	73	119	−67	36.02
Virginia (White)	15	339	354	−35	9.00	241	487	728	−116	13.74
Virginia (Negro)	2	124	126	−90	41.67	85	111	196	−45	18.67
Washington	175	536	711	−180	20.20	589	279	868	−20	2.25
West Virginia (White)	55	139	194	+106	120.45	401	303	704	−84	10.66
West Virginia (Negro)	1	45	46	+31	206.67	76	63	139	−49	26.06
Wisconsin	177	641	818	−151	15.58	766	624	1,390	−148	9.62
Wyoming	5	38	43	−3	6.52	49	26	75	−31	29.25
TOTAL	6,052	29,584	35,636	−2,013	5.35	29,594	25,874	55,468	−6,042	9.82

Read table thus: The 1953 graduates of Alabama colleges and universities for white students will include 23 men and 302 women qualified for elementary school teaching. This table reports only degree students, regardless of varying requirements in the different states. For more detailed reports of supply in each teaching field, by sex, in each state, see Appendix A.

of degree candidates at the two different levels. A more detailed breakdown of the anticipated 1953 supply, field by field in each state, may be found in Appendix A.

Part II

The Demand for Teachers

"WHAT is the actual demand for teachers at each grade level and in each subject?" A clear-cut answer to this question would contribute much to the solution of a major educational problem. Not only do legislators, state and local educational authorities, and teacher-education institutions need this information; above all, students at the point of deciding whether or not they will enter preparation for teaching need the most accurate information obtainable about the *number* and the *nature* of the opportunities they may expect to be open to them after preservice preparation is completed.

The demand for teachers may be divided into two broad categories. First is the demand for a candidate to fill each existing position that becomes vacant, and second is the demand for a candidate to fill each newly created position.

Filling Vacancies in Existing Positions. In the present period of steadily expanding enrollments it seems fair to assume that every existing teaching position will be continued and that a candidate will be in "demand" if the present teacher resigns. It is possible, of course, that consolidation of districts may reduce the number of teaching posts, but the number so eliminated can be accurately determined. In scattered instances, also, some type of special service may be eliminated through lack of qualified candidates, but such cases are probably rare, and such action is directly in contradiction to common custom. The practice almost always followed is to seek and employ a candidate who is only partially qualified, and thus continue to maintain the position even when a fully qualified candidate cannot be found. Standards in every state have been violated in this manner—and in thousands of cases, or a similar number of classrooms would have been without teachers. The custom of admitting the partially qualified or even the unqualified is so general that the continuance of every existing teaching position may be taken for granted.

Two obstacles confront the researcher who seeks to measure demand by counting vacancies in existing positions. First is the fact that it is difficult, if not impossible, to determine the number of such vacancies. The seemingly simple task of counting all existing vacancies is yet to be accomplished. For example, when should the count be made? Employing authorities learn about intended resignations day by day from early spring until the new school year is actually under way the following September. In many instances the decision of a teacher to resign is dependent upon conditions and circumstances quite outside the control or knowledge of the superintendent. A young woman may quit if her fiancé is discharged from the armed services before a certain date, otherwise she may teach another year. A man may turn in his resignation if another place he is seeking is awarded to him. Still another may relinquish his contract if he is appointed to a fellowship he is seeking. The variety of these determining factors is endless. A superintendent's accurate report of need for teachers today may, therefore, be quite inaccurate tomorrow. The effort to determine in advance the total number of existing positions to become vacant before the opening of a new school year has not, and seemingly cannot go beyond day-to-day estimates. The meaning of these estimates becomes open to question the following day.

The second obstacle to a concise measurement of existing vacancies is even more involved. Here we face the task of determining when a new teacher is needed, and when one is not needed. It is difficult, if not impossible, to divide resigning teachers into two groups, namely, those who leave the profession, and those who merely shift to other teaching positions. A replacement—a new teacher—is needed when the re-

signing teacher quits teaching, but the teacher who moves to another teaching position is, himself, a replacement of the one whose place he fills. Thousands of teachers change positions each year. Although each one leaves a vacancy, *he also fills one* and thus the need for an outside person—a new teacher to come from the supply reservoir—does not arise.

This latter fact regularly causes much confusion and misunderstanding of the supply and demand problem. It is not easy to distinguish between the total estimated number of vacancies and the total number of new persons needed to staff the classrooms of the nation. Yet this must be accomplished if the reported number of vacancies in existing positions is to have a meaningful relation to needed supply of new teachers.

Filling Vacancies in Newly Created Positions. In this, the second broad category of "demand," the answers are even more elusive. Here are the demands, not for replacements in existing positions, but the speculative demand for *more* teachers for *new* positions. Some of the complications here are indicated by these questions: When does a class of first grade youngsters become so large as to require its division into two classes? Are there other overcrowded first grade classes in the building (or nearby) whose overflow can contribute to forming a new class? Who determines the maximum teacher-pupil ratio to be condoned? Is there an available room for this proposed additional class? Should another teacher be hired so that dual sessions may be operated in the same room? Are funds available to hire an additional teacher? If so, should these available funds be used to hire another teacher or should they be reserved to raise the salaries of those already employed? Is a teacher of a special subject needed to give instruction (or an educational service) not now offered? Should an undertrained teacher be released in the hope that a fully qualified one may be obtained? Has an obvious need for building funds depleted the district's resources at the expense of funds for needed personnel? What are the other competing demands for the funds which *might* be used to add another teacher to the staff?

These questions clearly show that this second category of "demand" may or may not be related to available supply. A superintendent might have applications from highly competent, fully qualified candidates and yet not be able to split an overflowing class or establish a new class in a subject not previously offered. The demand may be recognized and yet not lead to the employment of a new teacher. In other words, this second category may be no more than *potential* demand, and may be wholly without effect upon the number of qualified candidates in the "supply" reservoir. Unless and until these related questions are answered, it is impossible to determine whether or not a potential demand will lead to an employment opportunity. That is, the measurement of demand in a realistic sense is impossible until the demand is actually met through the employment of a new teacher.

How Demand Is Measured

In this, and in the five previous annual studies of teacher supply and demand in this series, it has been conceded that demand cannot be accurately measured before the opening of a school year. Conversely, it has been assumed that demand can be *meaningfully measured* and described by determining, after a school year opens, how many new teachers were actually employed and in what kinds of positions. In this study a "new" teacher is defined as one who did not teach anywhere (within or beyond state borders) the preceding year. It should be noted that (1) this is not a count of total vacancies; (2) it is not a count of inexperienced teachers; (3) it is not a count of former teachers returning to the classroom; (4) it is not a count of last spring's college graduates who have entered teaching; (5) it is not a count of teachers who hold a certain kind of certificate; (6) it is not a count of those who are or are not adequately prepared for the specific positions they

accept. It *is* a count of those who were not teachers the preceding year for whom there was a demand and who were employed in response to that demand. The search for this item of information was begun in the belief that such records—although always one year late, although they reflect demand only after that demand has been met—will have cumulative value, and if compiled annually will form a sound basis for the projection of future trends.

In reporting a "new" elementary school teacher the effort is made to classify him as teaching in (1) a one-room school, (2) the lower grades, or (3) the upper grades. A "new" high school teacher is reported as (1) teaching in one field exclusively, or (2) teaching in one field as a major assignment and in another field as a minor assignment. In small high schools, where a teacher sometimes teaches in three or even four fields, an arbitrary decision is made. At the time this report went to press the study of the demand for teachers last September had been completed in 26 states, Alaska, the District of Columbia, and Hawaii. (This study will be completed in other states later in the year.)

Table III presents a composite picture of the demand for teachers in the reporting states as such demand was met in September, 1952 by the employment of persons who did not serve as teachers anywhere during the 1951-52 school year.

1. The Demand for Elementary School Teachers. In the states in which the demand study for the current year has been completed, exactly 28,161 new elementary school teachers were employed last September. The complete staff of elementary school teachers in service in these states totals 307,947. These new teachers, therefore, are 9.82 per cent of all teachers in service where the study was conducted. If this ratio of new teachers to all teachers in service is typical of the entire nation, where approximately 650,000 are now in service, it indicates *the demand for new elementary school teachers, as that demand was met last September, was 63,830.* Without doubt most of these new teachers went into existing positions which became vacant because of the withdrawal of teachers from the profession. Some may, however, have been added (1) to relieve overcrowding, (2) to meet the demands of the expanding enrollment, (3) to offer needed educational services, or (4) to replace undertrained teachers. Answers to such questions can only be found in the local school systems. Relief of overcrowded conditions may have been provided in some schools while, at the same time, conditions were steadily deteriorating in other schools. As we look to the future, however, we know these four categories of demand will continue to dominate the scene.

2. The Demand for High School Teachers. In the states in which the demand study for the current year has been completed, exactly 17,698 new high school teachers were employed last September. The complete staff of high school teachers in service in these states totals 150,244. These new teachers, therefore, are 12.24 per cent of all teachers in service where the study was conducted. If this ratio of new teachers to all teachers in service is typical of the entire nation, where approximately 335,000 are in service, it indicates *the demand for new high school teachers, as that demand was met last September, was 41,004.* Since overcrowding is not yet a major problem in the high schools, since the enrollment is not yet in a state of rapid expansion, and since there is no current problem of replacing undertrained high school teachers, the new teachers employed last September were doubtless replacements, in the main, of teachers who withdrew from the profession. The future demands for high school teachers, however, will soon feel the impact of the changing conditions described earlier in this report.

What Do New High School Teachers Teach?

Table III not only shows the total number of new high school teachers employed in the reporting states—it

TABLE III

Demand for Teachers in September, 1952, in 26 States, Alaska, District of Columbia, and Hawaii, and Supply Produced by Colleges in the Same Areas in 1952

Based on reports from: Alabama, Alaska, Arizona, Arkansas, Connecticut, District of Columbia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Maine, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Tennessee, Utah, Vermont, Virginia, Wisconsin, and Wyoming.*

This table shows the number of persons who entered teaching positions in September, 1952, who did not teach anywhere in 1951-52. Lines 1-21 show new high school teachers. The major assignment is tallied on the line and the minor assignment in the column. Line 22 shows new elementary school teachers. The column at the extreme right shows the supply of degree graduates produced in 1952 by colleges in these areas. No person is counted twice.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	408	1		1			12			10	1	1		49	14	6	2	9		2	516	845
2	Art		254	2	25	3	6	3			1	6		2	1	4			18	2	3	330	873
3	Commerce	5	3	1,222	101	6	13	5	5	9	62	6	12	27	13	2	1		100	4	9	1,605	2,362
4	English	8	21	58	1,548	222	25	3	46	149	67	58	20	60	41	25		2	470	163	20	3,006	3,184
5	Foreign Language		2		97	192	12	2		2	5	2	1	3	2	2		1	49		3	375	800
6	Home Economics	4	8	27	80	14	1,144	16	2	9	11	5	1	64	108	37	10		39	3	10	1,592	2,196
7	Industrial Arts	7	6	5	13		1	602	15	1	47	2	46		33	9	3	10	44	1	5	850	1,415
8	Journalism			1	7	1			16										3			28	23
9	Library Science	3	1	7	40	4	3		3	181	8			1	1				14	2	5	273	190
10	Mathematics	12	3	20	45	8		17	1	3	729	5	57	21	250	20	34	47	99	2	8	1,381	1,503
11	Music	9	35	12	120	7	3	2		8	20	1,022	4	10	17	3		1	45	12	4	1,334	2,200
12	Phys. Ed.—Men	11		11	22	1		27		1	54	4	579	7	94	66	8	10	172	3	31	1,101	3,071
13	Phys. Ed.—Women	2	3	10	32		10			1	6	4	5	505	28	29			44	6	10	695	1,179
14	General Science	13	4	7	37	5	13	22		2	181	5	62	17	616	62	26	18	86	1	7	1,184	940
15	Biology	2		2	7	1	10	5			13		34	10	49	201	27	9	19	1	2	392	1,062
16	Chemistry	2			1	1					22	2	3		20	17	126	32	8		1	235	470
17	Physics	1						7			23		3	6	25	10	16	85	3			179	215
18	Social Science	23	7	60	229	29	3	15	2	23	80	25	161	36	80	33	4	4	1,267	15	23	2,119	4,393
19	Speech		1	2	40	14			5			9			1				9	134	3	218	684
20	Other			1	12		1				4	2	1	2	5		2	2	12	1	240	285	703
21	High School Total																					17,698	28,308
22	Elementary School Total																					28,161	15,648

Read table thus; Line 1 shows that 408 new teachers teach agriculture only; 1 teaches agriculture as a major and art as a minor assignment; 1 teaches agriculture as a major and English as a minor assignment

* Each state report is shown separately in Appendix B

shows the distribution of these new teachers among the various subject-matter fields. In some instances the college graduate may expect employment as a full-time teacher of a single field. This is most frequently true in agriculture, home economics, and industrial arts. In most of the positions open to the beginning teacher, however, it is necessary to teach in at least two fields. Knowledge of the combinations most frequently demanded is necessary if the student is to make a wise choice. Table III shows the total number of new teachers employed last September for each possible combination of two subjects in all of the reporting states. Widely varying conditions from state to state make necessary a study of the individual state tables shown in Appendix B. Average conditions, as shown in Table III, may not prevail in the state of chief interest to the student.

Part III

Analysis of Preparation of Elementary School Teachers

A MOVEMENT to improve professional standards for teachers has gained impetus steadily since the close of World War II, and particularly under the leadership of the National Commission on Teacher Education and Professional Standards of the NEA. In the vanguard of this movement is the effort to bring the elementary school teacher to equal status in every way—in salary, in qualifications, in prestige with the high school teacher. Giant strides have been made in half a dozen years. The 13 states (and the District of Columbia and Hawaii) which had established the degree standard for the elementary school certificate prior to World War II have been able to approach more nearly the enforcement of this requirement, as indicated by the consistent, year-to-year reduction in the total number of emergency certificate holders in service. (In September, 1950, 1951, and 1952, it was possible to fill *every elementary school* vacancy in Arizona with a teacher who held a standard Arizona certificate based on a bachelor's degree. The same was true in the District of Columbia in 1951 and 1952.) Eleven states have since set up the bachelor's degree as the minimum for new incoming elementary school teachers, and five other states have announced the adoption of this regulation, to become effective at designated future dates. The action of several low-standard states in moving up to the 60-semester-hour requirement for all new teachers, and their success in the immediate enforcement of this requirement, have contributed greatly to the improvement indicated in the following tables. In some states the advance in standards has sharply upgraded the elementary school teachers in the town and city schools, while the preparation of the one-room rural school teacher has tended to lag. Almost every state, however, has taken meaningful forward steps.

Significant is the fact that most movements, both state and national, for the improvement of the professional status of teachers are being clearly delineated in both qualitative and quantitative terms. The content of the teacher-education program, as well as its length, is the subject of consideration. While the qualitative aspects—although perhaps the more challenging—do not so readily lend themselves to measurement, it is comparatively easy to apply a quantitative measurement to the preparation of each elementary school teacher in a state. This measurement can be done in terms of semester hours of credit if records in the state office contain these data. If the needed records are not available in the proper form, however, participation in this part of the study is difficult, if not impossible.

In 1949, when this third part of the annual study was started, 22 states and Alaska participated. Tables IV and V, which follow, show the findings of this study in the varying number of states participating from year to year. These tables show the number of teachers in service in these states who have completed certain amounts of college education. Table IV shows that in 1949 the teachers in the participating states were

grouped as follows: 49.07 per cent held bachelor's degrees; 34.02 per cent had completed as much as one-half but not the full requirements for the bachelor's degree, and 16.91 per cent had earned less than 60 semester hours of credit. Table IV also shows these items of information concerning all elementary school teachers in the 37 states participating in 1950, in the 39 states participating in 1951, in the 36 states participating in 1952, and in 30 states in 1953. It would appear that during this four-year period the per cent of teachers holding bachelor's degrees has increased from 49.07 to 60.44 and that the per cent of those with less than 60 semester hours of credit has decreased from 16.91 to 8.33. It must be noted, however, that the states contributing the data shown in Table IV are not exactly the same, from year to year. Certain low-standard states participated in the earlier years (1949 or 1950) but were not able to repeat the study in the later years. Nevertheless, it is obvious, from Table IV, that a vast upgrading movement is in progress. This is shown even more strikingly in Table V.

Table V shows a composite of the 11 states (and the District of Columbia) which made the full analysis of the preparation of all elementary school teachers in service each of the five years. The gains here are indeed significant. Degree-holding teachers increased from 45.97 per cent to 61.23 per cent; teachers with less than 60 semester hours of credit decreased from 16.53 per cent to 6.96 per cent of the total. In this list of 11 states will be found several in which standards have been advanced markedly during the period under consideration. The states participating in this part of the annual study are widely scattered and may be considered to be broadly representative of the entire nation.

It must be recognized that the upward movement in standards has not been uniform among the states since the close of World War II; some states have been able to improve their standards much more than others. Some states have not yet attained the high level which prevailed in some other states when this study began, but Tables IV and V show that progress has been wide-

TABLE IV

PREPARATION OF ALL ELEMENTARY SCHOOL TEACHERS IN CERTAIN STATES, INDICATED IN SEMESTER HOURS OF CREDIT, ANNUALLY SINCE 1949

Year	Number of States Participating*	120 or More Hrs.		60–119 Hrs.		Less Than 60 Hrs.		Total	
		No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total
1949	23	108,827	49.07	75,653	34.02	37,507	16.91	221,787	100.00
1950	37	156,768	46.71	122,734	36.57	56,117	16.72	335,619	100.00
1951	39	184,307	48.85	133,430	35.36	59,594	15.79	377,331	100.00
1952	36	201,731	54.65	123,428	33.44	43,987	11.91	369,146	100.00
1953	30	209,176	60.44	108,068	31.23	28,848	8.33	346,092	100.00

* Not exactly the same states participated each year. Several state offices cannot complete this study until near the close of the academic year. The 1953 report was prepared for the printer at an earlier date than in previous years, thus preventing the participation of several states.

TABLE V

PREPARATION OF ALL ELEMENTARY SCHOOL TEACHERS IN 11 STATES AND THE DISTRICT OF COLUMBIA, INDICATED IN SEMESTER HOURS OF CREDIT, ANNUALLY SINCE 1949*

Year	120 or More Hours		60–119 Hrs.		Less Than 60 Hrs.		Total	
	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total
1949	59,062	45.97	48,178	37.50	21,241	16.53	128,481	100.00
1950	62,298	48.75	44,765	35.03	20,732	16.22	127,795	100.00
1951	73,974	55.00	44,937	33.41	15,595	11.59	134,506	100.00
1952	79,104	57.65	45,471	33.14	12,636	9.21	137,211	100.00
1953	85,019	61.23	44,175	31.81	9,668	6.96	138,862	100.00

* States submitting complete reports each year: Alabama, Arizona, Connecticut, District of Columbia, Kansas, Kentucky, Missouri North Carolina, Ohio, Utah, Vermont, and Wisconsin.

TABLE VI

Analysis of Preparation, in Semester Hours of Credit, of All Elementary School Teachers in 28 States and Alaska and the District of Columbia in 1952-53

Wherever possible, all elementary school teachers in service in a state are divided into seven groups, as shown in the seven column headings of this table. In some of the participating states it was only possible to divide the teachers into three broader groups. The totals, therefore, are shown in only these three groups: teachers having 120 or more semester hours of college credit; teachers having 60 but not more than 119 semester hours; teachers having less than 60 semester hours.

In 14 states and Alaska and the District of Columbia it was possible to make a separate analysis of the preparation of all new elementary school teachers entering service in September, 1952. These reports are shown in separate lines in *italics*. They provide a quick method of determining whether the new group improves or pulls down the average preparation of all elementary school teachers in service in that state. These new teachers are included in the state total shown in the preceding line; they are not added twice in the grand total.

State	150 or More Hrs.		120–149 Hrs.		90–119 Hrs.		60–89 Hrs.		30–59 Hrs.		1–29 Hrs.		No Hours		Total	
	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total
Alabama	667	4.71	7,397	52.25	2,164	15.29	2,182	15.41	1,747 teachers—12.34 per cent						14,157	100.00
Alaska	38	6.10	443	71.11	93	14.93	39	6.26	6	.96	2	.32	2	.32	623	100.00
Alaska (New in 1952)	*9*	*7.83*	*86*	*74.78*	*9*	*7.83*	*8*	*6.95*	*1*	*.87*	—	—	*2*	*1.74*	*115*	*100.00*
Arizona	804	16.97	3,817	80.56	117	2.47	—	—	—	—	—	—	—	—	4,738	100.00
Arizona (New in 1952)	*26*	*6.86*	*353*	*93.14*	—	—	—	—	—	—	—	—	—	—	*379*	*100.00*
Arkansas	545	6.95	3,514	44.84	1,804	23.02	1,346	17.18	597	7.62	23	.29	8	.10	7,837	100.00
Arkansas (New in 1952)	*22*	*5.08*	*222*	*45.10*	*96*	*13.45*	*193*	*27.05*	*71*	*9.94*	*8*	*1.12*	*2*	*.28*	*714*	*100.00*
Connecticut	1,175	13.93	4,825	57.19	894	10.59	1,408	16.69	59	.70	50	.59	26	.31	8,437	100.00
D. C. (White)	563 teachers—70.91 per cent				128	16.12	81	10.20	12	1.51	10	1.26	—	—	794	100.00
D. C. (White—New in 1952)	*45 teachers—100.00 per cent*				—	—	—	—	—	—	—	—	—	—	*45*	*100.00*
D. C. (Negro)	765 teachers—85.67 per cent				86	9.63	35	3.92	6	.67	1	.11	—	—	893	100.00
D. C. (Negro—New in 1952)	*44 teachers—100.00 per cent*				—	—	—	—	—	—	—	—	—	—	*44*	*100.00*
Illinois	3,887	11.59	16,536	49.30	4,815	14.36	6,137	18.30	1,937	5.77	227	.68	—	—	33,539	100.00
Kansas	1,651	13.84	4,520	37.89	1,294	10.84	3,377	28.31	943	7.90	138	1.16	7	.06	11,930	100.00
Kansas (New in 1952)	*103*	*7.74*	*637*	*47.86*	*94*	*7.06*	*488*	*35.16*	*29*	*2.18*	—	—	—	—	*1,331*	*100.00*
Kentucky	713	5.16	5,009	36.22	1,628	11.77	4,862	35.16	1,017	7.36	497	3.59	102	.74	13,828	100.00
Maine	89	2.06	898	20.73	881	20.34	1,766	40.78	697 teachers—16.09 per cent						4,331	100.00
Maine (New in 1952)	*12*	*2.37*	*208*	*41.11*	*86*	*17.00*	*130*	*25.69*	*27*	*5.33*	*21*	*4.15*	*22*	*4.35*	*506*	*100.00*
Michigan[1]	1,966	9.61	10,562	51.64	2,769	13.54	3,767	18.42	1,313	6.42	77	.37	—	—	20,454	100.00
Minnesota[2]	355	2.87	2,586	20.88	674	5.44	5,927	47.87	2,840	22.94	—	—	—	—	12,382	100.00
Missouri	2,571	15.29	6,506	38.68	2,068	12.29	3,579	21.28	1,942	11.55	135	.80	18	.11	16,819	100.00
Montana	274	7.07	995	25.66	562	14.50	1,684	43.43	257	6.63	105	2.71	—	—	3,877	100.00
Montana (New in 1952)	*14*	*2.29*	*114*	*18.63*	*31*	*5.06*	*335*	*54.74*	*82*	*13.40*	*36*	*5.88*	—	—	*612*	*100.00*
Nebraska	455	5.08	1,772	19.78	994	11.09	2,210	24.66	1,518	16.94	1,734	19.35	278	3.10	8,961	100.00
Nebraska (New in 1952)	*19*	*1.43*	*185*	*1.395*	*30*	*2.26*	*173*	*13.05*	*169*	*12.74*	*472*	*35.60*	*278*	*20.97*	*1,326*	*100.00*

State	150 or More Hrs.		120–149 Hrs.		90–119 Hrs.		60–89 Hrs.		30–59 Hrs.		1–29 Hrs.		No Hours		Total	
	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total	No. of Teachers	Per Cent of Total
Nevada	14	1.31	587	55.12	145	13.61	258	24.23	52	4.88	9	.85	—	—	1,065	100.00
Nevada (New in 1952)	*5*	*1.77*	*106*	*62.35*	*16*	*9.41*	*29*	*17.06*	*11*	*6.47*	*5*	*2.94*	—	—	*170*	*100.00*
New Mexico	642	16.33	2,665	67.76	441	11.21	179	4.55	6	.15	—	—	—	—	3,933	100.00
New Mexico (New in 1952)	*98*	*17.59*	*411*	*73.79*	*39*	*7.00*	*8*	*1.44*	*1*	*.18*	—	—	—	—	*557*	*100.00*
North Carolina (White)	558	3.72	12,657	84.42	1,190	7.94	339	2.26	145	.97	65	.43	39	.26	14,993	100.00
North Carolina (White—New in 1952)	*36*	*2.34*	*1,255*	*81.65*	*149*	*9.70*	*64*	*4.16*	*18*	*1.17*	*11*	*.72*	*4*	*.26*	*1,537*	*100.00*
North Carolina (Negro)	593	9.37	5,608	88.62	98	1.55	24	.38	2	.03	1	.02	2	.03	6,328	100.00
North Carolina (Negro—New in 1952)	*16*	*3.99*	*380*	*94.76*	*5*	*1.25*	—	—	—	—	—	—	—	—	*401*	*100.00*
North Dakota[3]	671 teachers—14.26 per cent				295	6.27	1,560	33.14	714	15.17	1,030	21.88	437	9.28	4,707	100.00
Ohio	3,587	13.50	11,693	44.01	4,119	15.50	6,112	23.00	930	3.50	131	.49	—	—	26,572	100.00
Ohio (New in 1952)	*2,097 teachers—70.98 per cent*				*220*	*7.44*	*640*	*21.64*	—	—	—	—	—	—	*2,957*	*100.00*
Oklahoma (White)	1,412	14.06	7,289	72.57	1,176	11.71	167	1.66	—	—	—	—	—	—	10,044	100.00
Oklahoma (Negro)	62	8.35	645	86.81	33	4.44	3	.40	—	—	—	—	—	—	743	100.00
Oregon	1,351	19.10	2,586	36.56	1,969	27.83	1,088	15.38	80	1.13	—	—	—	—	7,074	100.00
Oregon (New in 1952)	*151*	*18.66*	*493*	*60.26*	*115*	*16.58*	*29*	*4.13*	*4*	*.57*	—	—	—	—	*702*	*100.00*
South Carolina (White)	2,048	30.39	2,625	38.95	831	12.33	861	12.78	374 teachers—5.55 per cent						6,739	100.00
South Carolina (Negro)	453	8.25	2,553	46.49	941	17.13	1,050	19.12	495 teachers—9.01 per cent						5,492	100.00
Tennessee	1,282	7.75	7,055	42.61	2,454	14.82	4,646	28.06	642	3.88	477 teachers—2.88 per cent				16,556	100.00
Texas (White)	27,280 teachers—93.60 per cent				1,074	3.69	528	1.81	185	.63	—	—	79	.27	29,146	100.00
Texas (Negro)	5,119 teachers—97.63 per cent				86	1.64	26	.50	4	.08	—	—	8	.15	5,243	100.00
Utah	282	8.44	2,295	68.71	319	9.55	315	9.43	96	2.88	33	.99	—	—	3,340	100.00
Utah (New in 1952)	*5*	*1.16*	*333*	*77.62*	*25*	*5.83*	*44*	*10.26*	*11*	*2.56*	*9*	*2.10*	*2*	*.47*	*429*	*100.00*
Vermont	67	3.73	537	29.87	281	15.63	656	36.48	205	11.40	44	2.45	8	.44	1,798	100.00
Vermont (New in 1952)	*1*	*1.04*	*90*	*93.75*	*3*	*3.13*	*1*	*1.04*	—	—	*1*	*1.04*	—	—	*96*	*100.00*
Virginia (White)	4,740 teachers—45.12 per cent				4,137 teachers—39.38 per cent				1,629 teachers—15.50 per cent						10,506	100.00
Virginia (Negro)	2,569 teachers—71.82 per cent				879 teachers—24.57 per cent				129 teachers—3.61 per cent						3,577	100.00
West Virginia (White)	1,068	10.89	4,034	41.12	1,095	11.16	2,405	24.51	1,209 teachers—12.32 per cent						9,811	100.00
West Virginia (Negro)	69	11.70	423	71.69	25	4.24	73	12.37	—	—	—	—	—	—	590	100.00
Wisconsin	1,280	8.99	4,879	34.27	2,025	14.23	4,794	33.68	1,198	8.42	59	.41	—	—	14,235	100.00
Wisconsin (New in 1952)	*59*	*5.55*	*647*	*58.91*	*110*	*6.61*	*729*	*43.84*	*112*	*6.73*	*6*	*.36*	—	—	*1,663*	*100.00*
TOTAL	209,176 teachers—60.44 per cent				108,068 teachers—31.23 per cent				28,848 teachers—8.33 per cent						346,092	100.00

[1] The Michigan report does not include the teachers in Detroit and in four counties. [2] The Minnesota report is for the 1951–52 school year. [3] The North Dakota report includes all rural school teachers but does not include the teachers in 150 of 520 town schools.

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spread. A broad outline of the task yet to be achieved is shown in Table VI.

Table VI, which portrays the situation in each of the 29 states participating in this part of the 1953 study, shows an amazing difference in the educational opportunities of elementary school children in the different states. In some states, for example, there is evidence of a serious and sustained effort to support a strong program of elementary school education, as indicated by the high professional attainments of practically all of the teachers in service. In a few states the odds are as high as nine to one that the child will have a teacher whose comprehensive grasp of the major fields of knowledge is at least assured by four full years of college study. True, this record does not indicate the specific nature of the undergraduate program pursued by the teacher, but it always indicates the maturity of the teacher and a richness of background concomitant with the successful completion of any four-year college program. Moreover, the fact that nine of every ten elementary school teachers hold the bachelor's degree in these states bespeaks the achievement of one major objective—the quantitative standard has been established, leaving the way open for even more significant improvement —state and local authorities are at liberty to devote their full attention to the other, the *qualitative,* aspect of the teacher's preparation. In a two-year or even a three-year curriculum the major effort must be directed toward extending the available time, thus leaving little or no opportunity to explore the respective merits of the conflicting theories in teacher education.

At the other extreme, also shown in Table VI, are those states where the odds run as high as seven to one *against* the child having a teacher with the competencies developed through four years of college preparation. If it were possible to present a more detailed analysis within a given state, it could also be shown that, in at least one state, certain groups of children are at each of these extremes in the different types of schools operating under the same state regulations. In this particular case 39.39 per cent of all elementary teachers in the state have less than 60 semester hours' preparation, with 22.45 per cent having less than 30 hours. Yet the preparation of the town and city elementary school teachers averages 109.8 semester hours. This means that the rural one-room schools, where four of every ten teachers of the state are located, operate under an entirely different standard. In reality the state maintains two standards, not one, for the education of children in its elementary schools.

Table VI presents still another type of evidence indicating the manner in which a state is improving the qualifications of its elementary school teaching corps from year to year. In 14 states and Alaska and the District of Columbia it was possible to make a separate analysis of the preparation of the new elementary school teachers employed last September. These figures, when compared with the figures showing the preparation of the whole corps of elementary school teachers in the state, show whether the newly employed group tends to upgrade or to lower the general level of preparation. The reports of these states are most encouraging. In 12 of the 16 reporting areas the preparation of the new group is better, and in some instances much better, than the preparation of the whole group. In only four areas do the new groups compare unfavorably, and in only one instance is there a pronounced number of poorly prepared teachers in the new group. (Preparation of new teachers is shown in italics in Table VI.) It follows, of course, that the states bringing in the most highly qualified new groups are the same states in which a high standard already prevails among the whole corps of elementary school teachers. It seems clear that a state will be content with a new group of poorly prepared teachers only if it has, as a regular practice, condoned the employment and retention of such teachers in the past. Existence of a highly qualified corps of teachers in service is obviously the most substantial support of the

policy of hiring only highly qualified new teachers.

When one considers the broad question of demand for teachers, the problem of replacing the undertrained teachers reported in Table VI cannot be ignored. It is an inescapable part of demand.

The tables portraying the levels of preparation of the elementary school teachers in each state take on added significance when the effort of the state to produce qualified teachers is also considered, as shown in Part I of this report. Careful examination of the data contained in the three parts of this national report will contribute to a clearer understanding of the unsolved problems in each state.

Conclusion

The annual national teacher supply and demand study is designed to bring to light certain pertinent facts which can be assembled on a uniform basis in every state, thus making possible interstate comparisons. Many state studies of this problem go into much greater detail, as is dictated by the problems peculiar to a state. The further development of such state studies is to be encouraged.

The annual national report is designed to serve the entire profession, since every professional worker has a stake in the problem, but the report is particulary pointed to three groups: (1) employing officials, (2) counselors of students, both in high school and in college, and (3) students themselves.

Just now, and in the trying times ahead, superintendents want to anticipate their future needs for teachers. They want to know about the sources and amounts of available supply for each type and grade level of teaching service.

Without doubt the big test lies ahead. Prevailing standards can be maintained and further strengthened, in large measure, as the professional zeal of the employing superintendent dictates. If the ground gained in the last half dozen years is to be held it will be because the local employing officer, above all others, takes his place on the firing line and courageously stands for his professional convictions. The *quality* of instruction, particularly in the elementary schools, hinges upon the vigor with which the superintendent holds to his demands for fully prepared teachers.

Counselors carry a major professional responsibility for the development of the selective admission concept. They want facts—they must have many more facts—to show superior young men and women both the *number* and the *nature* of future opportunities in teaching. This report sharpens the appreciation of this need.

Finally, the student wants to choose his future and prepare for it in terms of facts. To the high school senior and to the beginning college student the facts brought to light in this annual report can be most helpful. The decision to teach or not to teach, the decision to prepare for elementary or high school service, the choice of this or that subject as a major field of concentration, the choice of this or that supporting minor subject—these are vital decisions in the lives of young people. Is it to be done by rule of thumb, or on the basis of fact?

Should the American people let the manpower needs of the school drift? Or should we deliberately seek to guide more of our best young people toward the teaching profession?—*Inaugural Address of William G. Carr, Executive Secretary, National Education Association, October 13, 1952.*

APPENDIX A

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All white institutions in ALABAMA				All Negro institutions in ALABAMA				ALASKA (Univ. of)				All institutions in ARIZONA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	23	302	325	713	43	589	632	573	2	2	4	1	101	279	380	392
90 semester hours	3	92	95	83	13	195	208	206	...	...	...	...	...	...	...	...
60 semester hours	...	46	46	10	10	78	88	59	...	...	...	...	...	...	...	...
30 semester hours	...	58	58	7	13	84	97	44	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	26	498	524	813	79	946	1025	882	2	2	4	1	101	279	380	392
HIGH SCHOOL																
Agriculture	50	...	50	83	34	...	34	28	...	...	...	...	...	...	...	...
Art	2	15	17	10	2	...	2	2	...	...	...	...	5	7	12	11
Commerce	35	46	81	94	3	41	44	28	...	...	...	...	14	10	24	17
English	19	53	72	138	16	47	63	57	...	1	1	...	8	19	27	26
Foreign Language	5	12	17	25	3	4	7	2	...	...	...	...	7	5	12	12
Home Economics	...	77	77	88	...	66	66	65	...	...	...	...	...	27	27	21
Industrial Arts	18	...	18	12	35	1	36	22	...	...	...	...	36	...	36	37
Journalism	...	...	...	1	...	...	...	...	...	...	...	...	2	...	2	2
Library Science	1	8	9	7	...	...	...	...	...	...	...	...	...	...	...	...
Mathematics	23	26	49	65	21	13	34	21	...	...	...	...	11	...	11	10
Music	18	36	54	52	3	10	13	16	...	...	...	...	7	7	14	17
Physical Ed.--Men	75	...	75	118	15	...	15	17	...	...	...	...	46	...	46	51
Physical Ed.--Women	...	50	50	46	...	19	19	12	...	...	...	...	...	22	22	22
General Science	10	8	18	50	25	15	40	33	...	...	...	...	14	4	18	4
Biology	9	9	18	34	...	5	5	2	...	...	...	...	15	2	17	9
Chemistry	13	4	17	22	10	3	13	9	...	...	...	...	1	...	1	4
Physics	1	...	1	4	...	...	...	...	...	...	...	...	...	...	...	1
Social Sciences	75	67	142	220	62	115	177	171	...	1	1	...	28	6	34	34
Speech	2	9	11	11	...	...	...	...	...	...	...	...	6	2	8	8
Other	33	11	44	43	21	23	44	37	...	...	...	...	...	1	1	...
HIGH SCHOOL TOTAL	389	431	820	1123	250	362	612	522	0	2	2	0	200	112	312	286
GRAND TOTAL	415	929	1344	1936	329	1308	1637	1404	2	4	6	1	301	391	692	678

Type of Preparation	All institutions in ARKANSAS				All institutions in CALIFORNIA				All institutions in COLORADO				All institutions in CONNECTICUT			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	61	524	585	659	839	2871	3710	4145	79	405	484	658	119	312	431	376
90 semester hours	33	229	262	218	...	...	...	...	10	31	41	34	...	...	...	...
60 semester hours	74	286	360	382	...	...	...	...	13	75	88	71	...	...	...	...
30 semester hours	9	23	32	17	...	...	...	...	...	...	...	...	1	3	4	3
ELEMENTARY TOTAL	177	1062	1239	1276	839	2871	3710	4145	102	511	613	763	120	315	435	379
HIGH SCHOOL																
Agriculture	63	...	63	56	46	...	46	54	19	...	19	16	1	...	1	2
Art	6	4	10	8	84	142	226	264	15	18	33	61	6	3	9	7
Commerce	21	48	69	65	51	83	134	167	17	26	43	108	14	12	26	20
English	22	89	111	113	63	123	186	264	32	37	69	117	23	30	53	62
Foreign Language	...	4	4	9	26	57	83	94	8	15	23	15	5	20	25	30
Home Economics	...	125	125	135	...	119	119	158	...	51	51	52	...	10	10	7
Industrial Arts	23	3	26	29	316	...	316	265	31	...	31	137	21	...	21	12
Journalism	...	1	1	1	...	...	...	...	...	...	...	2	...	...	...	...
Library Science	...	5	5	...	5	26	31	20	...	3	3	2	6	12	18	11
Mathematics	25	18	43	47	44	22	66	84	29	11	40	48	27	12	39	32
Music	18	26	44	67	94	124	218	260	44	40	84	111	12	8	20	23
Physical Ed.--Men	138	...	138	129	269	...	269	394	73	...	73	138	58	...	58	75
Physical Ed.--Women	...	41	41	35	...	165	165	148	...	43	43	55	...	21	21	18
General Science	11	3	14	43	1	...	1	...	24	2	26	37	3	2	5	11
Biology	19	5	24	30	82	46	128	149	14	6	20	25	11	9	20	18
Chemistry	6	3	9	27	25	8	33	20	6	1	7	1	3	3	6	6
Physics	4	1	5	5	25	5	30	25	1	1	2	10	1	...	1	...
Social Sciences	137	77	214	221	266	131	397	430	72	37	108	166	69	21	90	101
Speech	5	10	15	15	25	32	57	107	17	12	29	28	...	...	...	...
Other	8	2	10	10	275	311	586	163	24	4	28	110	...	...	...	...
HIGH SCHOOL TOTAL	506	465	971	1045	1697	1394	3091	3066	425	307	732	1239	260	163	423	435
GRAND TOTAL	683	1527	2210	2321	2536	4265	6801	7211	527	818	1345	2002	380	478	858	814

APPENDIX A—Continued

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All white institutions in DELAWARE				All Negro institutions in DELAWARE				All white institutions in DIST. OF COLUMBIA				All Negro institutions in DIST. OF COLUMBIA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	4	51	55	49	2	6	8	5	6	50	56	38	4	37	41	51
90 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
60 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	4	51	55	49	2	6	8	5	6	50	56	38	4	37	41	51
HIGH SCHOOL																
Agriculture	3	...	3	3	6	...	6	5	...	...	...	...	...	...	...	...
Art	...	1	1	2	...	...	...	...	1	...	1	4	1	2	3	2
Commerce	...	...	...	...	...	...	...	...	1	...	1	...	1	2	3	4
English	...	6	6	7	1	1	2	...	3	7	10	20	...	13	13	8
Foreign Language	...	6	6	5	...	...	...	...	1	...	1	4	3	6	9	5
Home Economics	...	8	8	6	...	1	1	3	...	1	1	...	...	4	4	3
Industrial Arts	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...
Journalism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Library Science	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mathematics	...	1	1	2	1	...	1	...	1	4	5	9	...	1	1	8
Music	1	1	2	4	...	...	...	...	...	...	...	2	7	10	17	18
Physical Ed.—Men	9	...	9	9	...	...	...	...	17	...	17	22	3	...	3	5
Physical Ed.—Women	...	7	7	6	...	...	...	...	...	2	2	9	...	4	4	6
General Science	...	...	...	...	...	...	...	...	...	...	...	3	1	4	5	9
Biology	...	1	1	2	1	...	1	1	8	5	13	9	1	...	1	1
Chemistry	...	...	...	2	...	...	...	1	...	...	...	3	...	...	...	1
Physics	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Social Sciences	4	3	7	7	1	...	1	3	27	7	34	30	12	12	24	20
Speech	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Other	...	1	1	...	...	...	...	...	2	5	7	7	...	...	...	...
HIGH SCHOOL TOTAL	18	35	53	55	10	2	12	21	61	31	92	123	29	58	87	90
GRAND TOTAL	22	86	108	104	12	8	20	26	67	81	148	161	33	95	128	141

Type of Preparation	All institutions in FLORIDA				All white institutions in GEORGIA				All Negro institutions in GEORGIA				HAWAII (Univ. of)			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	87	651	738	830	28	278	306	603	21	295	316	416	6	95	101	78
90 semester hours	12	21	33	35	4	10	14	19	...	...	...	...	...	...	...	...
60 semester hours	12	29	41	47	6	11	17	25	...	...	...	...	...	...	...	...
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	111	701	812	912	38	299	337	647	21	295	316	416	6	95	101	78
HIGH SCHOOL																
Agriculture	38	...	38	44	27	...	27	30	15	...	15	16	10	...	10	8
Art	5	18	23	19	1	1	2	3	1	...	1	5	1	1	2	1
Commerce	25	68	93	80	9	45	54	57	19	23	42	51	...	2	2	2
English	32	38	70	74	18	46	64	77	10	35	45	46	...	4	4	6
Foreign Language	7	17	24	22	...	4	4	13	...	5	5	6	...	...	...	...
Home Economics	...	34	34	51	...	110	110	102	...	25	25	43	...	12	12	7
Industrial Arts	46	1	47	38	25	...	25	26	6	...	6	7	...	...	...	...
Journalism	2	1	3	4	...	...	...	...	...	...	...	...	...	...	...	...
Library Science	2	13	15	18	...	1	1	1	...	...	...	...	...	1	1	1
Mathematics	32	18	50	68	11	7	18	29	13	14	27	28	2	1	3	2
Music	51	38	89	65	11	20	31	14	6	9	15	9	2	...	2	2
Physical Ed.—Men	156	...	156	146	42	...	42	38	9	...	9	18	...	...	...	2
Physical Ed.—Women	...	77	77	40	...	22	22	23	...	...	...	6	...	2	2	2
General Science	42	19	61	76	27	6	33	39	10	9	19	30	2	3	5	2
Biology	4	8	12	30	...	1	1	4	37	5	42	37	...	...	...	...
Chemistry	...	...	...	2	2	3	5	1	16	1	17	8	...	...	...	...
Physics	9	...	9	...	1	...	1	...	1	...	1	...	...	...	...	...
Social Sciences	98	38	136	115	43	38	81	111	53	42	95	120	...	4	4	5
Speech	6	11	17	16	...	1	1	2	...	...	...	...	1	1	2	...
Other	6	6	12	21	...	...	...	...	...	...	...	...	...	...	...	...
HIGH SCHOOL TOTAL	561	405	966	929	217	305	522	570	196	168	364	430	18	31	49	40
GRAND TOTAL	672	1106	1778	1841	255	604	859	1217	217	463	680	846	24	126	150	118

APPENDIX A—Continued

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All institutions in IDAHO				All institutions in ILLINOIS				All institutions in INDIANA				All institutions in IOWA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	13	77	90	85	397	1699	2096	1963	132	685	817	762	31	301	332	451
90 semester hours	...	10	10	11	...	...	...	...	...	4	4	4	2	12	14	22
60 semester hours	...	...	...	...	...	...	...	...	3	10	13	12	30	977	1007	988
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	122
ELEMENTARY TOTAL	13	87	100	96	397	1699	2096	1963	135	699	834	778	63	1290	1353	1583
HIGH SCHOOL																
Agriculture	12	1	13	11	59	...	59	69	50	...	50	54	76	...	76	86
Art	3	2	5	4	32	69	101	83	19	39	58	78	25	33	58	67
Commerce	1	6	7	11	92	89	181	187	87	54	141	158	67	33	100	125
English	7	14	21	30	95	167	262	291	79	130	209	198	51	67	118	144
Foreign Language	1	2	3	2	25	70	95	110	32	38	70	61	11	12	23	23
Home Economics	...	23	23	17	4	161	165	185	...	140	140	158	...	164	164	167
Industrial Arts	9	...	9	10	51	1	52	145	64	...	64	116	42	...	42	70
Journalism	1	1	2	1	2	1	3	2	...	1	1	...	5	3	8	7
Library Science	...	...	...	...	43	15	58	73	1	36	37	14	...	4	4	1
Mathematics	2	2	4	3	65	53	118	150	50	23	73	90	54	15	69	83
Music	10	10	20	26	120	156	276	275	70	92	162	159	82	88	170	181
Physical Ed.—Men	44	...	44	53	339	...	339	368	306	...	306	340	171	...	171	209
Physical Ed.—Women	...	11	11	18	...	157	157	163	...	84	84	62	...	45	45	57
General Science	11	1	12	12	28	11	39	51	24	3	27	28	50	16	66	93
Biology	2	1	3	2	66	31	97	106	46	19	65	67	30	9	39	37
Chemistry	...	...	...	3	51	11	62	48	25	6	31	35	8	2	10	9
Physics	1	...	1	...	21	1	22	51	22	3	25	27	8	...	8	5
Social Sciences	25	6	31	42	236	108	344	341	164	67	231	270	125	50	175	250
Speech	4	1	5	6	38	88	126	162	5	17	22	23	27	66	93	109
Other	9	1	10	24	236	16	252	196	5	19	24	33	10	10	20	4
HIGH SCHOOL TOTAL	142	82	224	275	1603	1205	2808	3056	1049	771	1820	1971	842	617	1459	1727
GRAND TOTAL	155	169	324	371	2000	2904	4904	5019	2184	1470	2654	2749	905	1907	2812	3310

Type of Preparation	All institutions in KANSAS				All institutions in KENTUCKY				All white institutions in LOUISIANA				All Negro institutions in LOUISIANA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	60	336	396	410	76	449	525	476	66	401	467	531	84	262	346	419
90 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
60 semester hours	223	789	1012	1014	87	311	398	422	...	...	...	...	...	...	...	...
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	283	1125	1408	1424	163	760	923	898	66	401	467	531	84	262	346	419
HIGH SCHOOL																
Agriculture	22	...	22	32	37	...	37	36	45	...	45	59	17	...	17	23
Art	4	25	29	32	8	9	17	28	11	14	25	26	2	2	4	3
Commerce	34	29	63	88	73	77	150	151	36	56	92	115	6	14	20	14
English	35	77	112	122	21	80	101	111	16	41	57	87	3	18	21	39
Foreign Language	7	12	19	18	1	23	24	23	10	9	19	28	4	4	8	5
Home Economics	...	88	88	110	...	61	61	75	...	52	52	92	...	7	7	26
Industrial Arts	66	...	66	79	28	...	28	22	42	...	42	51	4	...	4	17
Journalism	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Library Science	...	...	...	1	...	10	10	12	...	2	2	4	...	...	...	18
Mathematics	38	10	48	65	33	19	52	60	33	19	52	66	16	6	22	16
Music	55	71	126	131	36	54	90	68	24	21	45	63	15	16	31	15
Physical Ed.—Men	129	...	129	145	114	...	114	143	127	...	127	140	29	...	29	22
Physical Ed.—Women	...	50	50	42	...	27	27	32	...	28	28	37	...	15	15	12
General Science	5	...	5	17	6	5	11	24	42	18	60	52	10	8	18	19
Biology	23	5	28	47	27	19	46	60	7	1	8	5	2	2	4	11
Chemistry	7	3	10	23	7	4	11	14	2	2	4	8	1	...	1	11
Physics	7	...	7	5	2	...	2	7	...	...	...	1	...	...	...	...
Social Sciences	82	38	120	156	157	56	213	244	66	42	108	114	24	36	60	70
Speech	10	7	17	14	4	6	10	7	14	12	26	20	1	1	2	1
Other	2	9	11	16	13	...	13	9	...	...	...	6	...	...	...	...
HIGH SCHOOL TOTAL	528	424	952	1143	567	450	1017	1126	475	317	792	974	134	129	263	322
GRAND TOTAL	811	1549	2360	2567	730	1210	1940	2024	541	718	1259	1505	218	391	609	741

APPENDIX A—Continued

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All institutions in MAINE				All institutions in MARYLAND				All institutions in MASSACHUSETTS				All institutions in MICHIGAN			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	73	167	240	202	59	311	370	335	190	1113	1303	1258	315	1732	2047	1985
90 semester hours	1	12	13	71	...	...	...	...	15	135	150	144	...	...	...	...
60 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	13	411	424	458
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	74	179	253	273	59	311	370	335	205	1248	1453	1402	328	2143	2471	2443
HIGH SCHOOL																
Agriculture	9	...	9	6	14	...	14	15	...	...	...	...	53	...	53	61
Art	6	2	8	10	10	12	22	21	15	46	61	63	20	50	70	68
Commerce	31	25	56	39	4	6	10	12	24	71	95	91	74	69	143	135
English	15	20	35	34	12	41	53	72	74	108	182	225	67	156	223	229
Foreign Language	8	19	27	14	10	17	27	18	27	68	95	109	22	56	78	78
Home Economics	...	41	41	22	...	41	41	28	...	94	94	93	...	134	134	133
Industrial Arts	16	...	16	18	28	...	28	29	120	...	120	128	173	...	173	155
Journalism	...	...	...	...	...	...	...	...	3	1	4	2	6	5	11	8
Library Science	...	...	...	...	...	...	...	...	...	...	...	...	1	5	6	4
Mathematics	13	2	15	12	17	10	27	23	44	21	65	60	94	33	127	136
Music	2	6	8	5	23	25	48	39	74	69	143	149	90	82	172	176
Physical Ed.—Men	28	...	28	17	35	...	35	53	184	...	184	221	201	...	201	207
Physical Ed.—Women	...	5	5	4	...	16	16	19	...	115	115	128	...	54	54	59
General Science	4	1	5	3	10	8	18	24	31	15	46	49	38	10	48	49
Biology	4	...	4	4	1	9	10	6	23	19	42	55	54	14	68	73
Chemistry	4	...	4	6	1	...	1	2	10	8	18	33	27	...	27	36
Physics	2	...	2	2	1	...	1	1	10	...	10	19	9	1	10	6
Social Sciences	55	11	66	64	50	39	89	80	206	141	347	345	259	109	368	387
Speech	...	3	3	2	...	...	...	...	7	13	20	30	46	74	120	113
Other	...	...	...	5	80	16	96	73	26	22	48	34	20	29	49	57
HIGH SCHOOL TOTAL	197	135	332	267	296	240	536	515	878	811	1689	1834	1254	881	2135	2170
GRAND TOTAL	271	314	585	540	355	551	906	850	1083	2059	3142	3236	1582	3024	4606	4613

Type of Preparation	All institutions in MINNESOTA				All institutions in MISSISSIPPI				All institutions in MISSOURI				All institutions in MONTANA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	68	342	410	564	14	198	212	345	80	660	740	947	34	50	84	101
90 semester hours	...	...	...	...	...	...	...	35	...	31	31	6	...	...	...	...
60 semester hours	13	426	439	682	...	...	...	132	10	56	66	99	16	124	140	149
30 semester hours	6	110	116	146	...	...	...	51	7	36	43	4	...	...	...	...
ELEMENTARY TOTAL	87	878	965	1392	14	198	212	563	97	783	880	1056	50	174	224	250
HIGH SCHOOL																
Agriculture	39	...	39	18	73	...	73	99	13	...	13	9	19	...	19	18
Art	16	46	62	72	...	...	...	...	15	19	34	42	7	5	12	8
Commerce	45	49	94	122	11	60	71	101	47	56	103	112	10	15	25	30
English	78	141	218	216	18	114	132	116	37	75	112	138	2	2	4	23
Foreign Language	56	12	68	48	5	17	22	18	6	8	14	16	3	6	9	8
Home Economics	...	99	99	110	...	131	131	165	...	90	90	96	...	24	24	22
Industrial Arts	54	...	54	81	...	...	...	22	56	...	56	55	7	...	7	17
Journalism	...	2	2	2	...	...	...	...	...	...	...	...	...	...	...	1
Library Science	...	7	7	14	...	...	...	16	...	4	4	...	...	...	...	...
Mathematics	71	58	129	118	22	27	49	64	32	13	45	68	9	6	15	6
Music	59	98	157	172	14	32	46	39	77	66	143	151	11	7	18	16
Physical Ed.—Men	111	...	111	124	93	...	93	77	151	...	151	128	29	...	29	37
Physical Ed.—Women	...	85	85	59	...	19	19	37	...	62	62	63	...	15	15	10
General Science	94	17	111	146	56	31	87	72	4	2	6	11	6	...	6	8
Biology	...	...	...	...	...	...	...	...	19	5	24	29	4	5	9	8
Chemistry	...	...	...	...	...	...	...	...	7	2	9	15	2	2	4	7
Physics	...	...	...	...	...	...	...	...	1	...	1	4	...	...	...	...
Social Sciences	165	35	200	219	68	66	134	161	105	34	139	150	29	7	36	29
Speech	12	26	38	39	...	...	...	14	10	19	29	26	1	1	2	2
Other	30	22	52	51	29	58	87	27	2	...	2	5	1	...	1	9
HIGH SCHOOL TOTAL	829	697	1526	1611	389	555	944	1028	582	455	1037	1118	140	95	235	259
GRAND TOTAL	916	1575	2491	3003	403	753	1156	1591	679	1238	1917	2174	190	269	459	509

APPENDIX A—Continued

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All institutions in NEBRASKA				NEVADA (Univ. of)				All institutions in NEW HAMPSHIRE				All institutions in NEW JERSEY			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	35	257	292	331	8	40	48	55	30	67	97	108	110	477	587	534
90 semester hours	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...
60 semester hours	26	436	462	531	...	1	1	3	...	...	...	...	...	...	...	...
30 semester hours	10	122	132	120	2	1	3	4	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	71	815	886	987	10	42	52	62	30	67	97	108	110	477	587	534
HIGH SCHOOL																
Agriculture	21	...	21	19	5	...	5	2	2	...	2	4	...	...	...	...
Art	1	6	7	18	...	...	...	...	...	1	1	3	5	13	18	23
Commerce	16	40	56	79	...	4	4	...	3	4	7	11	59	38	97	141
English	22	52	74	84	3	2	5	2	10	13	23	21	51	98	149	159
Foreign Language	4	9	13	7	...	...	...	2	4	4	8	5	7	33	40	44
Home Economics	...	44	44	57	...	...	...	5	...	7	7	15	...	35	35	26
Industrial Arts	35	...	35	46	...	...	...	...	16	...	16	12	31	...	31	34
Journalism	1	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...
Library Science	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mathematics	44	5	49	40	1	2	3	...	3	1	4	16	20	32	52	47
Music	35	50	85	89	...	...	...	...	1	...	1	3	7	38	45	38
Physical Ed.—Men	80	...	80	71	1	...	1	2	1	...	1	2	90	...	90	101
Physical Ed.—Women	...	7	7	12	...	1	1	1	...	16	16	10	...	40	40	44
General Science	11	2	13	15	...	1	1	1	3	...	3	9	21	10	31	34
Biology	10	3	13	30	2	...	2	...	1	2	3	4	14	6	20	20
Chemistry	10	...	10	12	...	...	...	...	1	1	2	2	4	...	4	5
Physics	3	...	3	17	...	...	...	...	...	...	...	3	7	...	7	5
Social Sciences	66	22	88	117	2	1	3	3	25	6	31	31	93	56	149	145
Speech	18	8	26	29	...	...	...	...	...	...	...	...	1	9	10	9
Other	13	8	21	33	...	...	...	...	5	...	5	7	...	9	9	11
HIGH SCHOOL TOTAL	390	256	646	778	14	11	25	18	75	55	130	158	410	417	827	885
GRAND TOTAL	461	1071	1532	1765	24	53	77	80	105	122	227	266	520	894	1414	1420

Type of Preparation	All institutions in NEW MEXICO				All institutions in NEW YORK				All white institutions in NORTH CAROLINA				All Negro institutions in NORTH CAROLINA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	49	135	184	217	926	3999	4925	4466	34	594	628	624	80	369	449	426
90 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
60 semester hours	4	8	12	2	...	...	...	...	...	...	...	...	...	...	...	...
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	53	143	196	219	926	3999	4925	4466	34	594	628	624	80	369	449	426
HIGH SCHOOL																
Agriculture	10	...	10	...	23	...	23	38	46	...	46	43	53	...	53	71
Art	9	7	16	28	146	247	393	408	5	14	19	23	2	3	5	6
Commerce	11	16	27	57	144	186	330	369	39	102	141	127	8	75	83	69
English	15	16	31	30	127	158	285	360	60	136	196	236	10	48	58	83
Foreign Language	7	6	13	39	52	73	125	166	10	28	38	38	1	17	18	13
Home Economics	...	27	27	...	3	318	321	310	...	122	122	129	...	58	58	46
Industrial Arts	23	...	23	26	96	138	234	253	9	...	9	21	11	...	11	18
Journalism	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Library Science	...	...	...	...	11	66	77	56	4	8	12	10	...	...	...	9
Mathematics	14	...	14	16	91	38	129	194	54	27	81	105	12	7	19	23
Music	9	8	17	25	242	288	530	613	26	57	83	67	1	10	11	14
Physical Ed.—Men	47	...	47	46	433	...	433	534	133	...	133	197	25	...	25	23
Physical Ed.—Women	...	11	11	16	...	238	238	264	...	40	40	50	...	28	28	33
General Science	15	...	15	10	112	29	141	214	55	14	69	67	18	23	41	32
Biology	8	...	8	7	51	25	76	76	21	24	45	38	33	8	41	55
Chemistry	5	...	5	5	26	8	34	19	2	8	10	4	7	7	14	9
Physics	...	...	...	...	8	...	8	3	...	...	...	1	...	...	...	1
Social Sciences	39	8	47	70	264	103	367	454	66	55	121	130	65	59	124	106
Speech	8	2	10	5	59	93	152	162	...	...	...	...	...	...	...	...
Other	7	...	7	12	1	38	39	22	20	26	46	48	6	5	11	22
HIGH SCHOOL TOTAL	227	101	328	394	1889	2046	3935	4515	550	661	1211	1334	252	348	600	633
GRAND TOTAL	280	244	524	613	2815	6045	8860	8981	584	1255	1839	1958	332	717	1049	1059

APPENDIX A—Continued

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All institutions in NORTH DAKOTA				All institutions in OHIO				All institutions in OKLAHOMA				All institutions in OREGON			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	13	46	59	59	112	1222	1334	1394	151	625	776	832	225	270	495	484
90 semester hours	...	...	...	...	6	87	93	124	13	20	33	112	55	179	234	229
60 semester hours	25	236	261	236	...	293	293	639	...	...	...	...	...	...	...	...
30 semester hours	42	182	224	149	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	80	464	544	444	118	1602	1720	2157	164	645	809	944	280	449	729	713
HIGH SCHOOL																
Agriculture	20	...	20	17	6	...	6	6	82	...	82	37	25	...	25	15
Art	...	2	2	...	30	93	123	149	13	19	32	34	4	12	16	18
Commerce	17	17	34	55	21	122	143	203	61	91	152	207	6	27	33	30
English	8	28	36	28	128	136	264	291	30	107	137	153	13	32	45	47
Foreign Language	...	...	...	2	37	79	116	120	5	19	24	19	2	10	12	9
Home Economics	...	46	46	28	...	142	142	143	...	179	179	197	...	57	57	44
Industrial Arts	12	...	12	21	122	...	122	197	117	1	118	119	13	...	13	15
Journalism	...	...	...	...	...	6	6	2	...	2	2	4	...	2	2	1
Library Science	...	3	3	...	...	...	...	12	...	9	9	3	...	...	...	...
Mathematics	23	10	33	23	83	60	143	172	69	11	80	94	23	3	26	18
Music	8	12	20	18	130	150	280	318	42	66	108	107	34	27	61	63
Physical Ed.—Men	42	...	42	27	367	...	367	398	64	...	64	83	78	...	78	85
Physical Ed.—Women	...	17	17	16	...	163	163	160	...	23	23	25	...	30	30	30
General Science	15	4	19	16	80	15	95	160	33	10	43	47	15	12	27	16
Biology	3	4	7	5	81	90	171	162	55	8	63	70	14	6	20	20
Chemistry	1	...	1	4	50	7	57	60	10	1	11	15	5	2	7	9
Physics	...	...	...	...	32	6	38	43	6	...	6	5	3	...	3	6
Social Sciences	26	21	47	49	200	241	441	402	149	52	201	223	65	13	78	56
Speech	1	1	2	2	60	46	106	144	17	23	40	49	6	7	13	9
Other	6	3	9	10	60	80	140	67	...	...	...	...	4	...	4	...
HIGH SCHOOL TOTAL	182	168	350	321	1487	1436	2923	3209	753	621	1374	1491	310	240	550	491
GRAND TOTAL	262	632	894	765	1605	3038	4643	5366	917	1266	2183	2435	590	689	1279	1204

Type of Preparation	All institutions in PENNSYLVANIA				All institutions in RHODE ISLAND				All white institutions in SOUTH CAROLINA				All Negro institutions in SOUTH CAROLINA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	277	1120	1397	1689	7	75	82	72	12	208	220	147	13	252	265	187
90 semester hours	...	6	6	6	...	...	...	...	...	...	...	...	...	...	...	...
60 semester hours	...	...	...	...	...	...	...	...	...	...	...	13	1	14	15	10
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	277	1126	1403	1695	7	75	82	72	12	208	220	160	14	266	280	197
HIGH SCHOOL																
Agriculture	54	...	54	46	1	...	1	...	17	...	17	33	28	...	28	26
Art	47	94	141	142	1	3	4	4	3	11	14	9	1	...	1	1
Commerce	163	192	355	327	7	11	18	25	5	44	49	31	6	33	39	21
English	146	233	379	506	48	8	56	64	12	70	82	69	14	31	45	24
Foreign Language	67	123	190	216	2	2	4	...	2	15	17	18	1	1	2	1
Home Economics	...	221	221	239	...	6	6	12	...	46	46	34	...	35	35	31
Industrial Arts	110	1	111	115	...	...	...	...	12	...	12	17	12	1	13	15
Journalism	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Library Science	8	27	35	43	...	...	...	...	...	3	3	...	...	11	11	2
Mathematics	170	82	252	290	8	9	17	16	17	16	33	19	5	8	13	5
Music	132	173	305	355	...	...	...	...	12	51	63	30	2	6	8	3
Physical Ed.—Men	197	...	197	298	...	...	...	6	58	...	58	59	30	...	30	20
Physical Ed.—Women	...	149	149	148	...	...	...	...	...	27	27	15	...	5	5	6
General Science	169	62	231	289	1	2	3	...	14	4	18	26	1	...	1	11
Biology	79	42	121	124	...	...	...	4	1	4	5	7	13	11	24	7
Chemistry	50	21	71	76	...	...	...	3	1	1	2	3	7	2	9	7
Physics	29	3	32	37	7	2	9	...	...	...	...	...	...	...	...	...
Social Sciences	460	175	635	692	34	...	34	39	63	19	82	74	40	25	65	42
Speech	24	32	56	34	...	...	...	...	...	9	9	8	...	...	...	...
Other	38	26	64	145	...	...	...	...	5	4	9	2	...	...	...	...
HIGH SCHOOL TOTAL	1943	1656	3599	4122	109	43	152	173	222	324	546	455	160	169	329	222
GRAND TOTAL	2220	2782	5002	5817	116	118	234	245	234	532	766	615	174	435	609	419

APPENDIX A—Continued

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All institutions in SOUTH DAKOTA				All institutions in TENNESSEE				All white institutions in TEXAS				All Negro institutions in TEXAS			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	22	54	76	131	93	517	610	640	109	1156	1265	1352	38	156	194	206
90 semester hours	...	...	...	...	...	35	35	29	10	132	142	115	18	92	110	54
60 semester hours	10	234	244	298	75	422	497	634	77	289	366	282	19	130	149	107
30 semester hours	17	179	196	240	...	...	...	...	89	219	308	205	23	106	129	180
ELEMENTARY TOTAL	49	467	516	669	168	974	1142	1303	285	1796	2081	1954	98	484	582	547
HIGH SCHOOL																
Agriculture	19	...	19	34	54	...	54	50	224	2	226	265	37	...	37	47
Art	1	3	4	8	14	10	24	17	22	62	84	110	...	...	...	...
Commerce	21	19	40	33	95	101	196	186	288	172	460	597	28	60	88	79
English	11	41	52	40	47	200	247	257	70	180	250	384	9	41	50	64
Foreign Language	2	1	3	5	9	34	43	42	14	61	75	126	1	1	2	3
Home Economics	...	32	32	26	...	166	166	188	...	234	234	312	...	118	118	156
Industrial Arts	17	...	17	14	72	...	72	66	113	6	119	177	17	2	19	17
Journalism	...	1	1	2	...	...	...	...	25	33	58	72	...	...	...	...
Library Science	...	...	...	...	1	7	8	6	1	51	52	68	...	8	8	8
Mathematics	24	6	30	20	50	34	84	75	86	34	120	184	14	8	22	30
Music	13	20	33	42	52	93	145	122	126	134	260	283	16	57	73	57
Physical Ed.—Men	61	...	61	52	172	...	172	185	297	...	297	383	76	...	76	61
Physical Ed.—Women	...	6	6	5	...	100	100	103	...	147	147	161	...	43	43	41
General Science	10	...	10	12	22	16	38	37	34	18	52	56	3	2	5	4
Biology	5	3	8	15	71	40	111	107	62	21	83	99	41	20	61	69
Chemistry	3	1	4	8	29	10	39	48	41	12	53	77	14	8	22	19
Physics	...	...	...	2	4	...	4	3	13	1	14	27	...	...	...	...
Social Sciences	58	12	70	100	202	147	349	415	240	143	383	536	57	65	122	160
Speech	5	2	7	14	14	7	21	32	30	69	99	112	...	...	...	...
Other	1	1	2	8	5	3	8	5	118	129	247	328	14	8	22	40
HIGH SCHOOL TOTAL	251	148	399	440	913	968	1881	1944	1804	1509	3313	4357	327	441	768	855
GRAND TOTAL	300	615	915	1109	1081	1942	3023	3247	2089	3305	5394	6311	425	925	1350	1402

Type of Preparation	All institutions in UTAH				All institutions in VERMONT				All white institutions in VIRGINIA				All Negro institutions in VIRGINIA			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	119	427	546	537	42	126	168	123	15	339	354	389	2	124	126	216
90 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
60 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	119	427	546	537	42	126	168	123	15	339	354	389	2	124	126	216
HIGH SCHOOL																
Agriculture	30	...	30	23	7	...	7	10	23	...	23	36	9	...	9	6
Art	8	6	14	15	1	...	1	...	5	21	26	77	3	3	6	3
Commerce	10	12	22	32	1	9	10	5	14	53	67	83	2	15	17	39
English	13	15	28	42	3	12	15	48	20	55	75	72	3	15	18	38
Foreign Language	10	6	16	15	1	14	15	18	7	23	30	41	...	4	4	3
Home Economics	...	45	45	50	...	15	15	12	...	63	63	53	...	20	20	29
Industrial Arts	29	...	29	47	4	...	4	6	15	...	15	25	39	4	43	37
Journalism	2	1	3	...	...	...	...	...	1	...	1	...	...	...	...	...
Library Science	1	2	3	1	...	...	...	1	...	5	5	11	...	9	9	4
Mathematics	13	1	14	20	4	2	6	12	19	17	36	47	...	8	8	8
Music	24	7	31	33	2	5	7	6	16	53	69	49	5	6	11	9
Physical Ed.—Men	73	...	73	78	...	...	...	4	40	...	40	29	7	...	7	8
Physical Ed.—Women	...	33	33	27	...	...	...	...	...	47	47	51	...	4	4	10
General Science	5	...	5	7	2	1	3	2	7	6	13	13	2	2	4	7
Biology	13	2	15	26	2	...	2	9	6	20	26	27	4	7	11	9
Chemistry	6	1	7	10	1	...	1	2	7	3	10	30	...	1	1	2
Physics	5	...	5	4	1	1	2	2	10	9	19	18	...	...	...	...
Social Sciences	58	8	66	86	17	11	28	47	47	81	128	162	11	13	24	29
Speech	8	11	19	19	...	3	3	1	3	6	9	9	...	...	...	...
Other	23	5	28	30	...	...	...	1	1	25	26	11	...	...	...	...
HIGH SCHOOL TOTAL	331	155	486	565	46	73	119	186	221	487	728	844	85	111	196	241
GRAND TOTAL	450	582	1032	1102	88	199	287	309	256	826	1082	1233	87	235	322	457

APPENDIX A—Concluded

Total Number of College and University Students Completing Certificate Requirements in the 48 States, Alaska, District of Columbia, and Hawaii, by Sex and by Major Field in 1953, and by Major Field in 1952

Type of Preparation	All institutions in WASHINGTON				All white institutions in WEST VIRGINIA				All Negro institutions in WEST VIRGINIA				All institutions in WISCONSIN			
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	1952
ELEMENTARY																
120 semester hours	175	536	711	891	55	139	194	88	1	45	46	15	177	641	818	969
90 semester hours	...	...	...	...	5	16	21	18	1	2	3	...	5	67	72	109
60 semester hours	...	...	...	...	6	64	70	58	...	1	1	1	59	501	560	738
30 semester hours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ELEMENTARY TOTAL	175	536	711	891	66	219	285	164	2	48	50	16	241	1209	1450	1816
HIGH SCHOOL																
Agriculture	19	...	19	13	10	...	10	14	2	...	2	4	69	...	69	82
Art	15	18	33	29	7	10	17	23	3	1	4	10	39	46	85	86
Commerce	14	11	25	29	26	26	52	59	2	10	12	14	28	18	46	62
English	28	33	61	72	25	48	73	97	3	4	7	14	47	130	177	203
Foreign Language	7	16	23	26	5	3	8	6	...	2	2	7	9	23	32	46
Home Economics	...	64	64	61	...	65	65	75	...	7	7	19	...	107	107	97
Industrial Arts	76	1	77	81	29	...	29	24	16	...	16	14	104	...	104	119
Journalism	3	1	4	...	...	...	...	...	...	...	...	...	...	1	1	2
Library Science	...	...	...	...	3	5	8	5	...	...	...	...	...	...	...	...
Mathematics	38	4	42	51	28	13	41	46	1	...	1	11	40	17	57	83
Music	43	26	69	52	18	28	46	54	1	4	5	...	42	51	93	101
Physical Ed.—Men	95	...	95	91	113	...	113	115	19	...	19	28	60	...	60	86
Physical Ed.—Women	...	41	41	37	...	35	35	38	...	10	10	14	...	60	60	56
General Science	21	5	26	24	14	6	20	41	...	...	...	4	44	11	55	64
Biology	19	4	23	35	35	6	41	27	8	7	15	9	52	13	65	73
Chemistry	9	1	10	14	...	...	...	...	1	...	1	2	32	5	37	40
Physics	...	...	...	3	13	5	18	8	...	...	...	3	9	...	9	9
Social Sciences	170	27	197	227	36	17	53	91	6	5	11	21	159	56	215	212
Speech	18	18	36	25	3	3	6	10	...	...	...	...	15	66	81	75
Other	14	9	23	17	36	33	69	45	14	13	27	14	17	20	37	42
HIGH SCHOOL TOTAL	589	279	868	888	401	303	704	788	76	63	139	188	766	624	1390	1538
GRAND TOTAL	764	815	1579	1779	467	522	989	952	78	111	189	204	1007	1833	2840	3354

Type of Preparation	All institutions in WYOMING				GRAND TOTALS				Type of Preparation
	Men 1953	Women 1953	Total 1953	1952	Men 1953	Women 1953	Total 1953	Total 1952	
ELEMENTARY									ELEMENTARY
120 semester hours	5	38	43	46	6,052	29,584	35,636	37,649	120 semester hours
90 semester hours	...	...	...	...	206	1,418	1,624	1,689	90 semester hours
60 semester hours	...	39	39	21	812	6,297	7,109	8,123	60 semester hours
30 semester hours	...	...	...	...	219	1,123	1,342	1,292	30 semester hours
ELEMENTARY TOTAL	5	77	82	67	7,289	38,422	45,711	48,753	ELEMENTARY TOTAL
HIGH SCHOOL									HIGH SCHOOL
Agriculture	8	...	8	9	1,754	3	1,757	1,891	Agriculture
Art	...	...	...	1	708	1,290	1,998	2,249	Art
Commerce	3	3	6	11	1,950	2,626	4,576	5,165	Commerce
English	...	...	...	7	1,832	3,742	5,574	6,585	English
Foreign Language	...	...	...	1	559	1,135	1,694	1,859	Foreign Language
Home Economics	...	12	12	14	7	4,311	4,318	4,648	Home Economics
Industrial Arts	...	...	...	7	2,467	160	2,627	3,161	Industrial Arts
Journalism	...	...	...	...	55	63	118	122	Journalism
Library Science	...	...	...	...	88	366	454	456	Library Science
Mathematics	3	...	3	4	1,790	920	2,710	3,142	Mathematics
Music	4	5	9	5	2,079	2,647	4,726	4,882	Music
Physical Ed.—Men	20	...	20	28	5,680	...	5,680	6,546	Physical Ed.—Men
Physical Ed.—Women	...	2	2	4	...	2,586	2,586	2,607	Physical Ed.—Women
General Science	3	1	4	3	1,319	477	1,796	2,216	General Science
Biology	...	...	...	...	1,213	617	1,830	1,995	Biology
Chemistry	...	...	...	...	556	166	722	842	Chemistry
Physics	...	...	...	...	278	39	317	373	Physics
Social Sciences	7	3	10	11	5,487	2,888	8,375	9,406	Social Sciences
Speech	...	...	...	...	531	827	1,358	1,504	Speech
Other	1	...	1	1	1,241	1,011	2,252	1,861	Other
HIGH SCHOOL TOTAL	49	26	75	106	29,594	25,874	55,468	61,510	HIGH SCHOOL TOTAL
GRAND TOTAL	54	103	157	173	36,883	64,296	101,179	110,263	GRAND TOTAL

APPENDIX B

The following tables show the demand for teachers in September, 1952, in each of the states participating in this part of the annual investigation.

The table is designed to identify each new high school teacher according to teaching assignment. If the new teacher devotes full time to the teaching of English, for example, a tally is entered on line 4 (English) in column 4 (English). This tally stands for one new teacher and indicates that the entire instructional assignment is in one field. Another new teacher may devote most of his time to the teaching of English but may also have a smaller assignment in social science. In this case the tally is entered on line 4 in column 18. But if the new teacher devotes most of his time to the teaching of social science and has a smaller teaching assignment in English the tally is entered on line 18 in column 4. If the new teacher divides his time about equally between two fields, or if he teaches in more than two fields, an arbitrary decision is made. Each new teacher is counted only once.

Line 21, column 21, shows the total demand for new high school teachers; line 22, column 21, shows the total demand for new elementary school teachers.

This table also shows, in column 1 at the extreme right, the number of 1952 college graduates in the state who were eligible for standard certificates in the various high school fields and in the elementary school field. Potential high school teachers are identified only by major (not minor) field of preparation. It does not follow, of course, that all new teachers employed last September came from the 1952 class of college graduates.

These tables are designed primarily for use by counselors working with students who want to know *how many* and *what kind* of teaching positions will be open to them if they prepare for teaching. These tables, if compiled for several consecutive years, most accurately indicate future trends in teaching opportunities.

TABLE I. Demand for Teachers—Alabama (White)

NUMBER OF NEW WHITE ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN ALABAMA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Alabama college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER — Major Assignment / COLUMN NUMBER — Minor Assignment	ALABAMA (White) 1952-1953	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	7			1			1				1			1				2			13	83
2	Art		2		2																	4	10
3	Commerce			19	3						2											27	94
4	English	6	1	2	47	2					7	1	1		3				6			76	138
5	Foreign Language				2	3							1	1								7	25
6	Home Economics	1					31			1				1	1	1						36	88
7	Industrial Arts	1						8					1									10	12
8	Journalism																						1
9	Library Science	2			1					9					1							13	7
10	Mathematics	3		1	3						17			1	12				5			44	65
11	Music	8	1		3						1	32							1			46	52
12	Phys. Ed.—Men	4		1	2			1			4		25	1	15	2	1		8			62	118
13	Phys. Ed.—Women	2			1					1	2		3	20	4	1			1			35	46
14	General Science	1	1		5	1				1	2	2	1	1	17			2	9			47	20
15	Biology	1									1				1	4	1	1				9	32
16	Chemistry	2													1		3		1			7	22
17	Physics													1		1		1				3	4
18	Social Science	10		8	7					3	6		5	2	7			1	32			81	220
19	Speech				2															2		4	11
20	Other																						43
21	High School Total																					526	1125
22	Elementary School Total																					461	713

APPENDIX B—Continued

TABLE II. Demand for Teachers—Alabama (Negro)

NUMBER OF NEW NEGRO ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN ALABAMA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Alabama college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
	ALABAMA (Negro) 1952-1953																						
1	Agriculture	4									1				1				1			7	28
2	Art		2																			2	2
3	Commerce			9							1											10	28
4	English	1		1	18	2				1	3	1		1	2				13			43	57
5	Foreign Language				1																	1	2
6	Home Economics				1		5															6	65
7	Industrial Arts							2														2	22
8	Journalism																						
9	Library Science	1		1	1					7									1			11	
10	Mathematics	3									10			1	8				3			25	21
11	Music	1	1		3	1						10			2				4			22	16
12	Phys. Ed.—Men	1									1		7						2			11	17
13	Phys. Ed.—Women													7	1	1						9	12
14	General Science	1	1		3						6		1		8	1			1			22	33
15	Biology																		1			1	2
16	Chemistry														1							1	9
17	Physics																						
18	Social Science	1		6		1					1	1			1				18			31	171
19	Speech											1										1	
20	Other																						37
21	High School Total																					205	522
22	Elementary School Total																					227	573

TABLE III. Demand for Teachers—Alaska

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN ALASKA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 University of Alaska bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
	ALASKA 1952-1953																						
1	Agriculture																						
2	Art																						
3	Commerce										1										2	3	
4	English			1	2	1	1			1		1										7	
5	Foreign Language																						
6	Home Economics				1										1	1						3	
7	Industrial Arts																						
8	Journalism																						
9	Library Science																						
10	Mathematics										1				2						1	4	
11	Music											1									2	3	
12	Phys. Ed.—Men																						
13	Phys. Ed.—Women																						
14	General Science																						
15	Biology															1						1	
16	Chemistry																						
17	Physics																						
18	Social Science					1				1									1			3	
19	Speech																						
20	Other										1	1								1		3	
21	High School Total																					27	
22	Elementary School Total	(One room, 23; lower grades, 57; upper grades, 35)																				115	1

APPENDIX B—Continued

TABLE IV. Demand for Teachers—Arizona

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN ARIZONA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Arizona college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment → 1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total DEMAND for Teachers	1 Total SUPPLY of Teachers
ARIZONA 1952-1953																						
1 Agriculture	5																				5	
2 Art		3			2													2			5	11
3 Commerce											1		1								4	17
4 English				6	2			5													13	26
5 Foreign Language					3								1					1			5	12
6 Home Economics						8							1								9	21
7 Industrial Arts							2			1		1									4	17
8 Journalism				1																	1	2
9 Library Science									1												1	
10 Mathematics										5				1							6	10
11 Music											4										4	19
12 Phys. Ed.—Men				1						1		6						1			9	21
13 Phys. Ed.—Women													7								7	22
14 General Science										1		1									2	4
15 Biology													1	1	1	1					4	6
16 Chemistry															1		1				2	4
17 Physics																						4
18 Social Science										1		1						1			3	14
19 Speech				1																	1	2
20 Other																						
21 High School Total																					82	286
22 Elementary School Total	(One room, 2; lower grades, 171; upper grades, 206)																				379	392

TABLE V. Demand for Teachers—Arkansas

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN ARKANSAS IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Arkansas college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment → 1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total DEMAND for Teachers	1 Total SUPPLY of Teachers
ARKANSAS 1952-53																						
1 Agriculture	39													1	1					1	41	56
2 Art		3		1																1	5	8
3 Commerce			51	5					3	6			1	2				7		2	75	65
4 English			5	58	8		1	4	12	10	2	4	3	5	3			33	6	4	168	111
5 Foreign Language					6													2			6	9
6 Home Economics						54			1				2	5		1		2			65	115
7 Industrial Arts				1			15				1										16	29
8 Journalism				1														1			2	1
9 Library Science				3		1			8	1										2	15	
10 Mathematics			2	9	2		1		1	44		7		16	2		2	24	1	3	114	47
11 Music				3							11		1	1				2			18	67
12 Phys. Ed.—Men			4	1					1	4		18		7				22		2	59	129
13 Phys. Ed.—Women			2	3						1		1	13	1	2			4	1	1	29	35
14 General Science	1		1	3						14		9	1	24	6	2	1	8		1	71	43
15 Biology														5	3			1		2	11	19
16 Chemistry														1	4						5	27
17 Physics									1												1	5
18 Social Science			6	23	2		1	1	6	9	4	19	3	13	6	1	1	48	1	4	146	221
19 Speech				1				1													2	15
20 Other																		1		9	10	10
21 High School Total																					869	1045
22 Elementary School Total	(One room, 29; lower grades, 313; upper grades, 372)																				714	659

APPENDIX B—Continued

TABLE VI. Demand for Teachers—Connecticut

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN CONNECTICUT IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Connecticut college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment ↓ / COLUMN NUMBER Minor Assignment →	CONNECTICUT 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture																						24
2	Art		5		2																	7	7
3	Commerce			14																		14	20
4	English				12	3													10		2	27	62
5	Foreign Language						8															8	10
6	Home Economics							15											2			17	7
7	Industrial Arts								15													15	12
8	Journalism																						
9	Library Science																						11
10	Mathematics										12			1		1			1			15	32
11	Music											6										6	23
12	Phys. Ed.—Men												6		1							7	73
13	Phys. Ed.—Women				1									11							1	13	18
14	General Science						2				4				6			1	1			14	11
15	Biology														1	1	1					3	18
16	Chemistry														1			1				2	6
17	Physics																						
18	Social Science				2						2		2	1	1	1			14			23	101
19	Speech																						
20	Other				2									1	1						4	8	
21	High School Total																					179	435
22	Elementary School Total	(One room, 1; lower grades, 384; upper grades, 381)																				766	376

TABLE VII. Demand for Teachers—District of Columbia (White)

NUMBER OF NEW WHITE ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN THE DISTRICT OF COLUMBIA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 District of Columbia college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment ↓ / COLUMN NUMBER Minor Assignment →	DIST. OF COLUMBIA (White) 1952-1953	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture																						
2	Art																						4
3	Commerce			2																		2	
4	English				2							1										3	20
5	Foreign Language																						4
6	Home Economics																						
7	Industrial Arts							1														1	
8	Journalism																						
9	Library Science																						
10	Mathematics										2											2	9
11	Music																						2
12	Phys. Ed.—Men												9									9	22
13	Phys. Ed.—Women																						6
14	General Science										1				1							2	1
15	Biology																						6
16	Chemistry																						1
17	Physics																						
18	Social Science																						20
19	Speech																						1
20	Other																						7
21	High School Total																					19	123
22	Elementary School Total	(Lower grades, 23; upper grades, 17; ungraded, 5)																				45	38

APPENDIX B—Continued

TABLE VIII. Demand for Teachers—District of Columbia (Negro)

NUMBER OF NEW NEGRO ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN THE DISTRICT OF COLUMBIA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 District of Columbia college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment / COLUMN NUMBER Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
DIST. OF COLUMBIA (Negro) 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1 Agriculture																						
2 Art		4																				
3 Commerce			6																			
4 English			1	1	1													3				
5 Foreign Language					2																	
6 Home Economics						6																
7 Industrial Arts							8															
8 Journalism																						
9 Library Science																						
10 Mathematics				1						2				2							5	8
11 Music											2										2	16
12 Phys. Ed.—Men												4									4	1
13 Phys. Ed.—Women													6								6	5
14 General Science														4				2			6	9
15 Biology																1					1	1
16 Chemistry																1					1	1
17 Physics																1					1	
18 Social Science				1							1							4			6	20
19 Speech																						
20 Other																						
21 High School Total																					64	90
22 Elementary School Total (lower grades, 25; upper grades, 18; ungraded, 1)																					44	51

TABLE IX. Demand for Teachers—Hawaii

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN HAWAII IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Hawaii college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment / COLUMN NUMBER Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
HAWAII 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1 Agriculture																						
2 Art		1																1			2	1
3 Commerce			1	1																	2	2
4 English				1						1								12			14	6
5 Foreign Language										1								1			2	
6 Home Economics																						7
7 Industrial Arts							7													1	8	
8 Journalism																						
9 Library Science									1												1	1
10 Mathematics		1			1											1		1			4	2
11 Music		1		2						1	5	1									10	2
12 Phys. Ed.—Men	1			1								1		1				2			8	2
13 Phys. Ed.—Women										1		1		1							3	2
14 General Science																						
15 Biology																						
16 Chemistry																						
17 Physics																						
18 Social Science	1		1	1								1	1								5	1
19 Speech																			1		1	
20 Other																				18	18	
21 High School Total																					80	40
22 Elementary School Total (One or two rooms, 2; lower grades, 94; upper grades, 51; kindergarten, 48)																					195	78

APPENDIX B—Continued

TABLE X. Demand for Teachers—Illinois

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN ILLINOIS IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Illinois college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment ↓ / COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
ILLINOIS 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1 Agriculture	48									3					1	1					53	69
2 Art		27		2							2										31	83
3 Commerce			120					1		2								1			124	187
4 English				240	6			4	4									6			260	291
5 Foreign Language				7	53																60	110
6 Home Economics				7		153		2		3			1			2					168	189
7 Industrial Arts		3					90			7							4	4			108	145
8 Journalism					1			5													6	9
9 Library Science				7				1	46												54	73
10 Mathematics										84						7	9				100	150
11 Music		13		4							90			5					8		120	275
12 Phys. Ed.—Men												83		11			3	17			114	368
13 Phys. Ed.—Women													100	2				6	4		112	163
14 General Science				1									2	60	6			5			74	21
15 Biology										2				5	77	2	3				89	106
16 Chemistry										5					4	60	3	6			78	43
17 Physics										2						3	37				42	51
18 Social Science	6			12	3					5				4				200			230	341
19 Speech								1			3								46		50	162
20 Other																						196
21 High School Total																					1873	3056
22 Elementary School Total																					2100	1963

TABLE XI. Demand for Teachers—Indiana

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN INDIANA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Indiana college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment ↓ / COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
INDIANA 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1 Agriculture	25													10		1					36	54
2 Art		24		4											2			3			33	78
3 Commerce			61	11			1			4		3	10					2			92	158
4 English				89	11	2			9			3	10	1				13	1	1	140	198
5 Foreign Language		1		20	14													2			37	61
6 Home Economics			4	6		80			2	2			21	8						2	125	158
7 Industrial Arts		1		1			40			3		2									47	116
8 Journalism				1				1													2	
9 Library Science			5		1				8	1								1		1	17	14
10 Mathematics				5	1					33		5	1	33			2	3		1	84	90
11 Music		6	1	9							75		2								93	149
12 Phys. Ed.—Men				2								18		3				29		23	75	340
13 Phys. Ed.—Women				1									13	1						5	20	62
14 General Science				1								1		25			1	5		1	36	28
15 Biology										1						1					2	67
16 Chemistry																						35
17 Physics										2											2	27
18 Social Science									2					2				52		1	57	220
19 Speech				4				1											1		6	28
20 Other																				34	34	33
21 High School Total																					938	1971
22 Elementary School Total	(One room, 23; lower grades, 855; upper grades, 577)																				1455	762

APPENDIX B—Continued

TABLE XII. Demand for Teachers—Kansas

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN KANSAS IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Kansas college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	KANSAS 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	13													2	1						16	32
2	Art		5		2		1															8	32
3	Commerce	1		49	4		1	1		1	4				1				7		1	72	88
4	English			4	43	8	8		6	11	4	6	1	3		3		1	11	16	2	129	122
5	Foreign Language				1	1																1	18
6	Home Economics			4	5		48			1				3	8	10			5	1	2	87	110
7	Industrial Arts	1		1	2			12			3		7		4	5			5		2	42	79
8	Journalism								1													1	
9	Library Science									5	1										1	7	1
10	Mathematics			1				1			19		2	1	15	3		6	3			51	65
11	Music				5						1	50							2		1	59	131
12	Phys. Ed.—Men			1				2					5						1			10	125
13	Phys. Ed.—Women				3									12	1						1	17	42
14	General Science					1	1				2		1	1	3	9		1				21	17
15	Biology						2	1					2		7							12	47
16	Chemistry														1	2					1	4	23
17	Physics														1	2						3	3
18	Social Science			1	11	1		6		1	4	1	12	1	8	7			26	3	3	87	196
19	Speech				1															1	2	4	15
20	Other																		2		16	18	16
21	High School Total																					649	1143
22	Elementary School Total	(Does not include new kindergarten teachers in 1952-53; they were included in 1951-52)																				1321	410

TABLE XIII. Demand for Teachers—Kentucky

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN KENTUCKY IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Kentucky college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	KENTUCKY 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	9													1							10	36
2	Art		9																			9	28
3	Commerce			39	3					1	1								1			47	151
4	English				48	2			2	2	1	1			2				14	3	1	76	111
5	Foreign Language				3	4													1		1	9	23
6	Home Economics			1	3	1	39				1			1	1				1			48	75
7	Industrial Arts							11											1			12	22
8	Journalism																						
9	Library Science				4					6									1			11	12
10	Mathematics			1	1						20		1		5				5			33	60
11	Music			1						1		32		2					1		1	38	68
12	Phys. Ed.—Men	2									1	1	17	2	4	2			7		2	40	143
13	Phys. Ed.—Women													10	1						1	12	32
14	General Science	2									1		1		11	2			1	1	2	27	24
15	Biology										1		1		4	5						11	60
16	Chemistry															1	6					9	16
17	Physics																	3				3	7
18	Social Science	2		1	8	1					1	1	7	2	1	1			39	1	1	68	244
19	Speech																			1		1	7
20	Other			1	4		1								1						10	19	9
21	High School Total																					483	1126
22	Elementary School Total																					851	476

APPENDIX B—Continued

TABLE XIV. Demand for Teachers—Maine

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN MAINE IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Maine college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment / COLUMN NUMBER Minor Assignment →	MAINE 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	5													1						1	7	6
2	Art		2																			2	10
3	Commerce			28									1									29	39
4	English				21	11								1					12	1		46	34
5	Foreign Language				3	7													3			13	14
6	Home Economics						30								1							31	22
7	Industrial Arts							14														14	18
8	Journalism																						
9	Library Science																						
10	Mathematics										1				13				2			16	12
11	Music											10										10	5
12	Phys. Ed.—Men												11		1	1			1		1	15	17
13	Phys. Ed.—Women													7					2			9	4
14	General Science				1						4		1		8				4			18	3
15	Biology										1					2			2			5	4
16	Chemistry																						6
17	Physics																						2
18	Social Science				4	1					5		2		2				24		1	19	64
19	Speech																						2
20	Other										1				1						29	31	5
21	High School Total																					285	267
22	Elementary School Total	(One room, 55; lower grades, 235; upper grades, 216)																				506	202

TABLE XV. Demand for Teachers—Michigan

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN MICHIGAN IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers.

LINE NUMBER Major Assignment / COLUMN NUMBER Minor Assignment →	MICHIGAN 1952-1953	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	31			1			3								1			1			37	
2	Art		75		1							2	1						1			80	
3	Commerce			76				1					1						1			79	
4	English		1	4	215	10	2		2		3	9	2		1				16	7		272	
5	Foreign Language				7	25				1				1					3	1		38	
6	Home Economics				5		111															116	
7	Industrial Arts	3	1			1		69			3		4	1								82	
8	Journalism				2				1													3	
9	Library Science				1					19									1			21	
10	Mathematics			3							94		3		6	1	2	3	1			113	
11	Music				2			1				131							1	1		136	
12	Phys. Ed.—Men			3	2	1		2			2		120		1	2			4			137	
13	Phys. Ed.—Women									1				28					1			30	
14	General Science	1						1			8		4	1	56	1	1	1	2		1	79	
15	Biology	1			1			2			2		3		1	16	2	2	5			55	
16	Chemistry						1				2				1	1	10	1				16	
17	Physics										1						1	2				6	
18	Social Science	1	2		22	2		1		5	13	1	5		3				141			196	
19	Speech				9	1	1				1								1	30		43	
20	Other																				55	55	
21	High School Total																					1574	
22	Elementary School Total	(One room, 486; lower grades, 915; upper grades, 204)																				1605	

The Michigan report of demand for teachers is incomplete; it does not include Detroit and four counties. The figures shown in this table are not included in composite Table 3.

APPENDIX B—Continued

TABLE XVI. Demand for Teachers—Minnesota

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN MINNESOTA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Minnesota college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	MINNESOTA 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	28													1							29	18
2	Art		19		2										1				1			23	72
3	Commerce			77	5	1				2	2				5				4			99	122
4	English		1	3	108	14			6	53	5	13	1	19	1				44	27		291	216
5	Foreign Language				1	2																3	48
6	Home Economics		1	1	2		89			1	1	1		10	8				2			118	110
7	Industrial Arts			1				18			6	1	5		6				5			62	81
8	Journalism																						2
9	Library Science				10	1				10									1	1		25	14
10	Mathematics			7	2			1			27	1	4	7	29				10			88	118
11	Music		2	3	6					1	1	68	1	1	2				10			95	172
12	Phys. Ed.—Men												7		9				4			20	124
13	Phys. Ed.—Women			1	2									33	6				4			46	59
14	General Science		2	2	3	1					33		9	4	50				9			113	146
15	Biology																						
16	Chemistry																						
17	Physics																						
18	Social Science		2	9	18	1		1		3	9	3	26	5	12				44	2		135	219
19	Speech																			5		5	39
20	Other																						51
21	High School Total																					1157	1611
22	Elementary School Total	(One room, 687; grades, 1131)																				1818	564

TABLE XVII. Demand for Teachers—Missouri

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN MISSOURI IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Missouri college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	MISSOURI 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	45									1				5				1			52	9
2	Art		40		2		2				1	2							2			49	42
3	Commerce			137	3		1		1		3				1				6			152	112
4	English	1	1	6	214	15	2		3	3	1	2			1				49	26		324	138
5	Foreign Language				2	20									1				2			25	16
6	Home Economics		2	1	2		47						4		2	2			3			61	96
7	Industrial Arts	2	1					78			2					2						83	52
8	Journalism				2				4													6	
9	Library Science				2					12	1											15	
10	Mathematics	1		2	2			4			150		2		18	2	2		9	1		193	68
11	Music		1	1	7		1				2	127										139	151
12	Phys. Ed.—Men	1		2	1			1			1		68		6	4			7			95	128
13	Phys. Ed.—Women										1			40		3			2			46	60
14	General Science	3			2			2			19		4		128	9		3	8			178	31
15	Biology				1						1		2		9	41	1		4			59	29
16	Chemistry										1				1		11					13	15
17	Physics														2	1		10				13	4
18	Social Science	1	1	9	4						7		12		2				246	1		283	150
19	Speech			1	1				2			2							5	35		46	28
20	Other																						5
21	High School Total																					1843	1118
22	Elementary School Total	(One room, 509; lower grades, 832; upper grades, 714)																				2055	947

APPENDIX B—Continued

TABLE XVIII. Demand for Teachers—Montana

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN MONTANA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Montana college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	MONTANA 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture				2										5	1						6	18
2	Art			1	3	3	1				2		2	1					1	1		7	16
3	Commerce			1	4	6	1			1	1	2	1						9	4		10	21
4	English						1															2	4
5	Foreign Language				1		1																
6	Home Economics				3	2	2							7	6		2		4			26	22
7	Industrial Arts							1			1		1		3				4	1		11	17
8	Journalism			1															1			2	1
9	Library Science																						
10	Mathematics			1	1										8				1			11	6
11	Music			1	3	1					2	5			1	1			1			14	16
12	Phys. Ed.—Men							1			3				2				6			12	17
13	Phys. Ed.—Women			1			2					1		1								5	10
14	General Science							1			6		1		1	2			2			13	8
15	Biology														4							4	3
16	Chemistry																						7
17	Physics																						
18	Social Science			2	7		1	1			2	1	3	1	2	1			10		1	32	29
19	Speech		1		1																	2	2
20	Other																						9
21	High School Total																					195	259
22	Elementary School Total	(One room, 269; lower grades, 184; upper grades, 152; other, 7)																				612	101

TABLE XIX. Demand for Teachers—Nebraska

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NEBRASKA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Nebraska college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	NEBRASKA 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	19	1					1							1							22	16
2	Art		3																1			6	26
3	Commerce			13	8		1		2		2	1	2	2					6			37	82
4	English			5	13	3		1	3	4	1	3	4						10	8		57	85
5	Foreign Language																	1				1	3
6	Home Economics			3	4		17			1	2				5	1			3	1		35	17
7	Industrial Arts			1	2			3			3		9		1			2	3			26	45
8	Journalism																						3
9	Library Science									1										1		2	
10	Mathematics							2	1		7	2	6	2	3	2	1		1			29	40
11	Music			1	15					3		32							1			52	89
12	Phys. Ed.—Men			2	1			4				1	1	1	1		2		9			22	71
13	Phys. Ed.—Women												1	3	1							5	12
14	General Science										1		1			1	4					7	15
15	Biology				1						1		3		1	1	1	1				9	10
16	Chemistry														1			2				3	12
17	Physics													1	2							3	17
18	Social Science			2	5	1		1		2	1	2	17	1		6	1	1	8	1		49	117
19	Speech				1															1		6	29
20	Other																						33
21	High School Total																					375	778
22	Elementary School Total	(One room, 907; lower grades, 220; upper grades, 199)																				1326	331

APPENDIX B—Continued

TABLE XX. Demand for Teachers—Nevada

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NEVADA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 University of Nevada bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	NEVADA 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total *DEMAND for[3] Teachers	1 Total *SUPPLY of[4] Teachers
1	Agriculture														1							1	2
2	Art																						
3	Commerce			7																		7	
4	English		1		3	1			1		1									4		11	2
5	Foreign Language				1																	1	1
6	Home Economics						5							1								6	5
7	Industrial Arts							1					1				1					2	
8	Journalism								1													1	
9	Library Science																						
10	Mathematics							1			6		1					1	1			10	
11	Music											3							1			4	
12	Phys. Ed.—Men										1											1	1
13	Phys. Ed.—Women													2								2	1
14	General Science							1														1	1
15	Biology																						
16	Chemistry																2					2	
17	Physics																						
18	Social Science					1						1	1						4			7	1
19	Speech																						
20	Other																						
21	High School Total																					56	18
22	Elementary School Total	(One room, 21; lower grades, 65; upper grades, 84)																				170	55

TABLE XXI. Demand for Teachers—New Jersey

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NEW JERSEY IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 New Jersey college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	NEW JERSEY 1952-1953	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total *DEMAND for[3] Teachers	1 Total *SUPPLY of[4] Teachers
1	Agriculture	7																				7	
2	Art		42																			42	23
3	Commerce			60																		60	112
4	English				98																	98	148
5	Foreign Language					40																40	45
6	Home Economics						49															49	26
7	Industrial Arts							34														34	34
8	Journalism																						
9	Library Science									24												24	
10	Mathematics										52											52	47
11	Music											51										51	38
12	Phys. Ed.—Men												23									23	101
13	Phys. Ed.—Women													45								45	44
14	General Science														30							30	45
15	Biology															10						10	20
16	Chemistry																9					9	3
17	Physics																	6				6	3
18	Social Science																		73			73	145
19	Speech																						9
20	Other																				39	39	11
21	High School Total																					692	886
22	Elementary School Total	(One room, 2; kindergarten, 242; grades 1-3, 768; grades 4-8, 1036)																				2048	534

In New Jersey it was not possible to identify the minor teaching assignments of new high school teachers. The figures shown in this table are not included in composite Table 3.

APPENDIX B—Continued

TABLE XXII. Demand for Teachers—New Mexico

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NEW MEXICO IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 New Mexico college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment ↓ / COLUMN NUMBER Minor Assignment →	NEW MEXICO 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	4													2							6	
2	Art		7					2														9	28
3	Commerce	1	2	12	4						1		1	1					1	2		27	37
4	English			3	32			1	1			1	1	2					4	1		46	30
5	Foreign Language					13	1	2				2		1					1			20	39
6	Home Economics	1	1		1	1	12															16	
7	Industrial Arts						1	5														6	26
8	Journalism																						2
9	Library Science			1					1	1	3											6	
10	Mathematics	1									12	1			1	1	2		2		1	21	16
11	Music		1		2					1		18	1	1					2			26	24
12	Phys. Ed.—Men	1			2						7	1	3								1	14	46
13	Phys. Ed.—Women		2		1									11								14	16
14	General Science				2								1	1	3	1			3			11	10
15	Biology	1									1					4	2			1		9	7
16	Chemistry										1						1					2	5
17	Physics												1					1	2			4	
18	Social Science	2	1		1	1					1		2		1				14			24	70
19	Speech																		1			1	3
20	Other																				5	5	13
21	High School Total																					287	394
22	Elementary School Total	(County, 143; Municipal, 557)																				700	217

TABLE XXIII. Demand for Teachers—North Carolina (White)

NUMBER OF NEW WHITE ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NORTH CAROLINA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 North Carolina college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment ↓ / COLUMN NUMBER Minor Assignment →	NORTH CAROLINA (White) 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	26																				26	43
2	Art		6																			6	20
3	Commerce			101	5						1				1				2			110	137
4	English			2	96	19				3	4	1		2	2				20	4		151	236
5	Foreign Language				7	10	1								1				2			21	45
6	Home Economics						85								14	2						101	139
7	Industrial Arts							25														25	24
8	Journalism																						
9	Library Science				3					14												17	16
10	Mathematics				3						51		8		12				4			78	103
11	Music											34										34	69
12	Phys. Ed.—Men										4		21		5	2			10			42	177
13	Phys. Ed.—Women													20					10			30	38
14	General Science						2				9		2		77				2			92	69
15	Biology			1			1				1		1			1			1			5	38
16	Chemistry											2					2					4	7
17	Physics																1					1	4
18	Social Science			2	19	1					3		5	4	1	1			60	2		98	130
19	Speech																						
20	Other																				8	8	48
21	High School Total																					852	1114
22	Elementary School Total	(One room, 41 grades 1-3, 434; grades 4-8, 1099)																				1537	624

APPENDIX B—Continued

TABLE XXIV. Demand for Teachers—North Carolina (Negro)

NUMBER OF NEW NEGRO ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NORTH CAROLINA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 North Carolina college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER — Major Assignment	COLUMN NUMBER — Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	NORTH CAROLINA (Negro) 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	9																				9	71
2	Art		1																			1	6
3	Commerce			15	1	1																17	65
4	English			1	22	13				1	1								4			40	83
5	Foreign Language				6	3					1								2			12	13
6	Home Economics						22								2							24	46
7	Industrial Arts							9			1											10	18
8	Journalism		*																				
9	Library Science									1									1			1	9
10	Mathematics										10		1		4				1			16	23
11	Music											7							1			8	14
12	Phys. Ed.—Men												7		2				1			10	23
13	Phys. Ed.—Women													4								4	13
14	General Science										4				16	2						22	32
15	Biology				1								1			1						3	55
16	Chemistry																						9
17	Physics																						1
18	Social Science				3	1				1	1								6			12	106
19	Speech																						
20	Other																				1	1	
21	High School Total																					193	633
22	Elementary School Total	(One room, 5; grades 1-3, 129; grades 4-8, 267)																				401	426

TABLE XXV. Demand for Teachers—North Dakota

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN NORTH DAKOTA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 North Dakota college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER — Major Assignment	COLUMN NUMBER — Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	NORTH DAKOTA 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	4													2				1		1	8	17
2	Art		1																1		1	3	
3	Commerce			2	13						3	1		1					3		3	26	55
4	English		2	2	7	1			1	1	2	6		2	1				12	2	3	44	28
5	Foreign Language					2													2		1	5	2
6	Home Economics			1	3		6					1			22						2	35	28
7	Industrial Arts							2			1		2		1				4			10	24
8	Journalism																		1			1	
9	Library Science																						
10	Mathematics		1	1	1	1									5				1			10	23
11	Music			2	11	1				1	3				2				1	1		21	18
12	Phys. Ed.—Men				1						1				3	1			5		1	12	27
13	Phys. Ed.—Women			2	1									1					1			5	16
14	General Science			1	6						5				1	1						12	16
15	Biology				1								2	1				1				5	5
16	Chemistry																						4
17	Physics										1											1	
18	Social Science			4	16	2	1				1	3	11	1	3	2	1		21		4	70	49
19	Speech			1																		1	2
20	Other				1																	1	10
21	High School Total																					270	321
22	Elementary School Total	(One room, 885; lower grades, 156; upper grades, 107)																				1148	59

APPENDIX B—Continued

TABLE XXVI. Demand for Teachers—Ohio

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN OHIO IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Ohio college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER — Major Assignment / COLUMN NUMBER — Minor Assignment	OHIO 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	27						2			1				5		1					36	6
2	Art		37		1							2										40	149
3	Commerce			103	6			3			9				4				23	2		150	203
4	English		1	3	127	34	1		2	7	3			2	2	7			48	9		246	291
5	Foreign Language				22	33					1					1			17			74	120
6	Home Economics			2	5	7	99				1	2		2		15			9			142	143
7	Industrial Arts	2		2	5			97			11		8		12		1	3				141	197
8	Journalism				1				2													3	2
9	Library Science				2	1				3									2			8	12
10	Mathematics	1			9			1			57		3		8	4	9	17				109	172
11	Music		7		22	3						141							8	3		184	118
12	Phys. Ed.—Men				4			12			7		135			17	2	1	7	3		208	198
13	Phys. Ed.—Women			2			6					1		39		17						65	160
14	General Science	1		3	3		7	13			25		6		72	4	9	9				152	160
15	Biology				1		7	4					9	3		37	1	1	4			67	162
16	Chemistry										8		2		9		31	17				67	66
17	Physics	1						7			14		1	3	18	3	9	29				85	43
18	Social Science				37	4	1			3	1	3	4	1	7				177		2	240	402
19	Speech				21	13														17		51	144
20	Other																				36	36	67
21	High School Total																					2104	3209
22	Elementary School Total																					2957	1394

TABLE XXVII. Demand for Teachers—Oklahoma

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN OKLAHOMA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Oklahoma college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER — Major Assignment / COLUMN NUMBER — Minor Assignment	OKLAHOMA 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	19						1														20	37
2	Art		8	2												1			2	1	1	15	34
3	Commerce			77	11		3				7		1						2			101	207
4	English			8	66		3					3	1		4	1			5	15		106	153
5	Foreign Language									1	1											2	19
6	Home Economics			2	7	1	72	1				1			1				1	1		87	197
7	Industrial Arts	1			1			39		1	2		3						6			53	119
8	Journalism								2													2	4
9	Library Science					1	1			3									1			6	3
10	Mathematics			1				3			37				10				3			54	94
11	Music				2						2	61										65	107
12	Phys. Ed.—Men										2	1	15	1					1			20	83
13	Phys. Ed.—Women													5					1			6	25
14	General Science					1	1	1			9	1	1	2	16	3			2			37	47
15	Biology										3		1	4		7	1		1			17	70
16	Chemistry				1								1			1						3	15
17	Physics													1				1				2	5
18	Social Science		1	1	6						3		10	2		1			43	1	2	70	223
19	Speech				2															3		5	49
20	Other																		1		10	11	
21	High School Total																					682	1491
22	Elementary School Total																					587	832

APPENDIX B—Continued

TABLE XXVIII. Demand for Teachers—Oregon

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN OREGON IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Oregon college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment / COLUMN NUMBER Minor Assignment →	OREGON 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	2						1			1				1	3						8	15
2	Art		1				1	1											1			6	18
3	Commerce			29	3		1		1					2	1	1			5			42	30
4	English		2	3	31	6	2		4	2	1	1		3	2	5			11	10		83	47
5	Foreign Language				2	3				1												6	9
6	Home Economics			3	4	1	14			1			1	5		1	1		2			33	44
7	Industrial Arts				1			12			1				1				2			17	15
8	Journalism																						1
9	Library Science		1		1		1			2									1			6	
10	Mathematics		1					1			12		5		3	1	1	1	2			27	18
11	Music			1	5		1			1		17		1		1			3			30	61
12	Phys. Ed.—Men										2		10		4	3			5			22	85
13	Phys. Ed.—Women				2		1				1			24	2	3			2			33	30
14	General Science	1						2			5		1		2	3			2			16	16
15	Biology				1								3	1	2	2	1					8	20
16	Chemistry										1				2			1				4	9
17	Physics										1					1						2	6
18	Social Science		1	2	4			1			2		2	2		1			16	1		32	56
19	Speech																		1			1	9
20	Other																						
21	High School Total																					376	491
22	Elementary School Total	(One room, 6; lower grades, 410; upper grades, 286)																				702	484

TABLE XXIX. Demand for Teachers—Tennessee

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN TENNESSEE IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Tennessee college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment / COLUMN NUMBER Minor Assignment →	TENNESSEE 1952-53	1 Agriculture	2 Art	3 Commerce	4 English	5 Foreign Language	6 Home Economics	7 Industrial Arts	8 Journalism	9 Library Science	10 Mathematics	11 Music	12 Phys. Ed.—Men	13 Phys. Ed.—Women	14 General Science	15 Biology	16 Chemistry	17 Physics	18 Social Science	19 Speech	20 Other	21 Total "DEMAND for" Teachers	1 Total "SUPPLY of" Teachers
1	Agriculture	11											1		2							14	50
2	Art		1		1														1			3	17
3	Commerce			27	2						3					1			1			34	186
4	English		1	3	17	4				3	1	1				2		1	12	4		49	257
5	Foreign Language					2																2	42
6	Home Economics			1	2		26				1				2		3		1			36	188
7	Industrial Arts							8			1											9	66
8	Journalism																						
9	Library Science									7	1								1			9	6
10	Mathematics									1	7		1			1	4	1	5			20	75
11	Music				2							15			1							18	122
12	Phys. Ed.—Men										3		17		1	6			9			36	184
13	Phys. Ed.—Women			1	1									18	1				1			21	101
14	General Science				1						2				1		3					7	37
15	Biology										1		1		4		4		1			11	107
16	Chemistry					1					1						1					3	68
17	Physics																						3
18	Social Science			2	3	1					2		1	1	1	2			9			22	415
19	Speech											1							1	1		3	32
20	Other																						5
21	High School Total																					297	1944
22	Elementary School Total																					720	640

The Tennessee report of demand for teachers includes inexperienced teachers only.

APPENDIX B—Continued

TABLE XXX. Demand for Teachers—Utah

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN UTAH IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Utah college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	UTAH 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	4						1			2								1			8	23
2	Art		4																1			5	15
3	Commerce			11	1														1			13	32
4	English		1	1	23	2					4	2		2	1	1			7	4	1	51	42
5	Foreign Language						1															1	15
6	Home Economics			2	9	1	23			1				6					1		1	46	30
7	Industrial Arts							9			1		1		1	1						13	47
8	Journalism																						
9	Library Science				1					2												3	1
10	Mathematics										11		2		2	1		1				17	20
11	Music				2	1					1	10			2							17	33
12	Phys. Ed.—Men				1						2		10					1				14	78
13	Phys. Ed.—Women			1	2		1				1	1		23						1	1	32	27
14	General Science							1			4				5				1			11	7
15	Biology														2	1			1			4	26
16	Chemistry														1		1					2	10
17	Physics																	1				1	4
18	Social Science			2	3						5		1	3	2				14		1	31	86
19	Speech				4															1		5	19
20	Other				3	1						1	1	1					1		2	9	30
21	High School Total																					283	565
22	Elementary School Total	(One room, 8; kindergarten, 53; grades 1-3, 201; grades 4-6, 151; other, 16)																				429	537

TABLE XXXI. Demand for Teachers—Vermont

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN VERMONT IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Vermont college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	VERMONT 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	1						1							1	1			1			5	10
2	Art		1																			1	
3	Commerce			12							3								1			16	5
4	English			1	10	12									2	1			6			32	48
5	Foreign Language				1														2			3	18
6	Home Economics						10							1		2					1	14	12
7	Industrial Arts							1							2						1	4	6
8	Journalism																						
9	Library Science									1												1	1
10	Mathematics			1	2	1					2		1		4			1				11	12
11	Music				2							6										8	6
12	Phys. Ed.—Men												6		2						1	9	4
13	Phys. Ed.—Women				1									2					1			4	
14	General Science														1	1		1				3	2
15	Biology														1		1					2	9
16	Chemistry										3											3	2
17	Physics															1						1	2
18	Social Science				3			1			2		1						3		1	11	47
19	Speech																						1
20	Other				1						1											2	1
21	High School Total																					130	186
22	Elementary School Total	(One room, 96; grades, 136)																				232	123

APPENDIX B—Continued

TABLE XXXII. Demand for Teachers—Virginia (White)

NUMBER OF NEW WHITE ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN VIRGINIA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Virginia college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	VIRGINIA (White) 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	16						1														17	36
2	Art		18				1							1								23	77
3	Commerce			107	2					1	3	3					1		7		1	125	83
4	English		1		68	11	1			4	11	2		5	4	1			61		3	172	72
5	Foreign Languages				1	11					1								8		1	29	41
6	Home Economics				1		56								4	1			1			63	53
7	Industrial Arts							28													1	29	25
8	Journalism																						
9	Library Science				1				1	18									1			21	11
10	Mathematics			1	3	1					58		5		18	1		1	4			92	47
11	Music		1		2							38		1								42	49
12	Phys. Ed.—Men				3						1		40		4	3			3		1	55	29
13	Phys. Ed.—Women				3									30	2	2			5		1	43	51
14	General Science				3						8		5	1	53	4	2	1	11		2	92	13
15	Biology				1								1			6	2		1			11	27
16	Chemistry															1	6					7	30
17	Physics																1	2				3	18
18	Social Science		1		17	1				1			5	2	4	1			58			90	162
19	Speech																			3		3	9
20	Other				1														2		12	15	11
21	High School Total																					932	824
22	Elementary School Total	(One room, 45; lower grades, 758; upper grades, 610)																				1413	389

TABLE XXXIII. Demand for Teachers—Virginia (Negro)

NUMBER OF NEW NEGRO ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN VIRGINIA IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Virginia college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER Major Assignment	COLUMN NUMBER Minor Assignment →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	VIRGINIA (Negro) 1952-53	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total "DEMAND for" Teachers	Total "SUPPLY of" Teachers
1	Agriculture	4						1														5	6
2	Art		6																			6	1
3	Commerce			23													1		1			25	35
4	English				15	7						1							9			32	38
5	Foreign Languages				2	1													2			5	3
6	Home Economics						11															11	50
7	Industrial Arts							8					1									9	37
8	Journalism																						
9	Library Science				1					7				1					1			10	4
10	Mathematics							1			12		1	1	1		1		1			18	8
11	Music										1	10			1							12	9
12	Phys. Ed.—Men												10						1			11	8
13	Phys. Ed.—Women				1									10								11	10
14	General Science										5	1	1		11	2	1				1	22	7
15	Biology												1		1							2	9
16	Chemistry																						2
17	Physics																						
18	Social Science				1									1	1				15			18	29
19	Speech																						
20	Other																				7	7	
21	High School Total																					204	241
22	Elementary School Total	(One room, 26; lower grades, 123; upper grades, 81)																				230	216

APPENDIX B—Concluded

TABLE XXXIV. Demand for Teachers—Wisconsin

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN WISCONSIN IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Wisconsin college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	WISCONSIN 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total DEMAND for Teachers	Total SUPPLY of Teachers
1	Agriculture	31						2			1				6	5	3	2	1			51	18
2	Art		9		1	1	1									1						13	96
3	Commerce		1	60	5					1	4		2	3					7			83	52
4	English		5	1	101	15	4		2	24	3	3	3	5	4	1			21	18		210	203
5	Foreign Language		1		7	3										1						12	46
6	Home Economics		2		13		83							2	10	1	1		4			116	97
7	Industrial Arts		1		1			25			1				2	1	1		6			38	119
8	Journalism																						2
9	Library Science				3					5											1	9	
10	Mathematics	1		1	3	1				1	18	1	2	6	12	1	6	4	5		2	64	83
11	Music				8		1	2			5	72	1	1	1	1			7			99	101
12	Phys. Ed.—Men	1		1	1	1		3			3		18	2	11	5	3	2	12			63	86
13	Phys. Ed.—Women		1		6							1		33	4	2			4			51	96
14	General Science	1			1	1				1	7	1	9	4	7	5	3		8			48	62
15	Biology			1		1					1		2		2	7	5	1	2			22	73
16	Chemistry										1				1	1	1	7	1			12	40
17	Physics										1		1				1		1			4	9
18	Social Science			2	10	3		3		3	4	2	9	2	4	3	1	1	52	1	2	102	212
19	Speech				1	1						2			1				1	11		17	75
20	Other										1						2	2	5		14	24	42
21	High School Total																					1038	1538
22	Elementary School Total	(One room, 635; kindergarten-grade 4, 642; grades 5-8, 331; other, 55)																				1663	969

TABLE XXXV. Demand for Teachers—Wyoming

NUMBER OF NEW ELEMENTARY AND HIGH SCHOOL TEACHERS EMPLOYED IN WYOMING IN SEPTEMBER, 1952, WHO DID NOT TEACH ANYWHERE DURING THE 1951-52 SCHOOL YEAR

Lines 1-20 show new high school teachers according to assignments. The major assignment is shown on the line and the minor assignment in the column. No person is counted twice. Line 21 shows total new high school teachers; line 22 shows new elementary school teachers. Column 1 at extreme right shows the number of 1952 Wyoming college and university bachelor's degree graduates prepared for the various teaching assignments.

LINE NUMBER / Major Assignment	COLUMN NUMBER / Minor Assignment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1
	WYOMING 1952-1953	Agriculture	Art	Commerce	English	Foreign Language	Home Economics	Industrial Arts	Journalism	Library Science	Mathematics	Music	Phys. Ed.—Men	Phys. Ed.—Women	General Science	Biology	Chemistry	Physics	Social Science	Speech	Other	Total DEMAND for Teachers	Total SUPPLY of Teachers
1	Agriculture	3														1			1			5	9
2	Art		1																1			2	1
3	Commerce			10	2	1	1												2			16	11
4	English		2	1	9	2				1	2	2			2				5	2	1	29	7
5	Foreign Language				1														1			2	1
6	Home Economics				1		11								2				1			15	14
7	Industrial Arts							1			2		1					1	1			6	7
8	Journalism				1																	1	
9	Library Science									1												1	
10	Mathematics				1			1			2				3			1				8	4
11	Music		1	1	1							10						1				14	5
12	Phys. Ed.—Men				1			2			2		1		1	2		3				12	28
13	Phys. Ed.—Women														2							2	4
14	General Science							1			1				2							4	3
15	Biology														1		1	1				3	
16	Chemistry										1											1	
17	Physics										1				2	1						4	
18	Social Science				3								2		1				8	1		15	11
19	Speech																			1		1	
20	Other (Including 2 junior high school teachers)																				26	26	1
21	High School Total																					167	106
22	Elementary School Total																					272	46

THE OUTLOOK FOR SCHOOL ENROLLMENTS

Research Division, National Education Association

The projection of future school enrollments is basic to any intelligent approach to the balancing of teacher supply and demand and to wise planning for new school facilities. Several such projections have been made, but the continuing increase in annual births indicates the need for reappraisal of previous estimates. The Journal *is indebted to the NEA Research Division for the analysis contained in "The Outlook For School Enrollments."*

SEVERAL years ago the U. S. Bureau of the Census and the U. S. Office of Education projected school enrollments on a national basis. Two developments point to the necessity for reconsideration of those projections. The high number of live births that have occurred since the projections were made offers evidence that, by 1958, enrollments in elementary schools will still be increasing instead of declining. The second development is that today the number of youth of high school age attending high school is higher than the earlier estimators anticipated and the outlook is now that these enrollments may continue to increase. Therefore, this new outlook means that plans for the use of facilities and staff in future years probably need revision in some states and local communities. The discussion that follows gives first, the outlook for school enrollments nationwide; and second, an overview of the problems encountered in estimating future enrollments in state and local school systems.

Nationwide Enrollments

BEFORE undertaking a revision of projected enrollments for the United States, one must decide what information to use from the Census Bureau and what information to use from the Office of Education.[1] The Census Bureau has published projections of the population, including that of school-age children, since its well-known forecast[2] of school enrollment up to 1960. The Census Bureau also estimates school enrollment annually. Due to differences in the time at which the enrollment is reported and differences in the method used, enrollment data from the Census Bureau and the Office of Education may not agree. The Census Bureau states what the enrollment is at a given time and the Office of Education compiles its report from state school systems as of the close of the school year. The Office of Education figures are usually a little higher than those of the Census Bureau because of duplicate enrollments. The true enrollment for a given school year probably falls somewhere in between. The enrollments reported in this article were estimated from the ratio of school enrollment as reported by the Office of Education to the school-age population as reported by the Census Bureau. By this process, the forecasts are intended to approximate what the Office of Education will report in future years as the enrollment in full-time public and nonpublic schools.

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[1] The NEA Research Division has also presented in its *Advance Estimates* each fall since 1942 various statistics about the public schools, limited to the current school year. However, the projections in this article were not based on these data.

Furthermore, the purpose of this article is not to set up a third series of projections or to present a criticism of the Census Bureau or the Office of Education projections of school enrollments. As additional information about the characteristics of the population from the 1950 Census becomes available, valuable extension and revision of the projections will be possible. Awaiting these developments, it seemed advisable now to encourage discussion and reconsideration of the meaning of population changes for the schools.

[2] U. S. Department of Commerce, Bureau of the Census. *Forecasts of Population and School Enrollment in the United States: 1948 to 1960.* Current Population Reports, Series P-25, No. 18. Washington, D. C.: The Bureau, February 14, 1949. 16 p.

Elementary School Enrollments

Sufficient new data are not yet available to make a revision of enrollments by grade advisable. However, a second look at enrollments by broad groups seems worthwhile. The elementary school group is defined for purposes of this article as pupils in kindergarten through the eighth grade. Candidates for these nine years of school normally come from the population five through 13 years of age. Table I shows the relationship between these two series of figures in certain years since 1930 and makes an estimate of what they will be in future years till 1960.

The per cents for 1929-30 and 1939-40, both over 100, appear to be contrary to fact. They are possible, however, because some 14-year-old and even 15-year-old youth attend elementary school, and transfers during the school year cause some duplication of enrollment figures. Over the years retardation in grades seems to be declining, and the Office of Education reports that enrollment data are becoming more nearly accurate.

Under these conditions, forecasting enrollments is hazardous. Yet in the next few years it is reasonable to expect that the relationship between population and enrollment will be relatively stable. Almost all children from five to 13 years of age are in school. Of the five-year-olds only a little over half are either in kindergarten or the first grade, according to the Census Bureau. In other words, the enrollment figures for elementary school children could be estimated too low by approximately one and a half million children. However, it is unlikely that many of these children can attend school unless kindergartens become more widely available. The assumption in Table I is that with the pressing need for facilities in all the grades, kindergarten facilities will be provided for more children slowly, if at all.

The current climb in elementary school enrollments began from the low point of approximately 20 million children in the 1945-46 school year. The high number of live births in 1951 and 1952 assure rapid increases in enrollment until at least the 1957-58 school year. And contrary to what was projected several years ago, the peak year for elementary school enrollment must now be advanced to at least the 1959-60 school year.

The term "nonpublic" encompasses both private and parochial schools. Nonpublic elementary schools have experienced a slow but relatively steady increase in the proportion of children enrolled. In Table I, the assumption is made that this proportion will continue to increase from about 12.8 per cent in 1952-53 to 13.5 per cent in 1959-60. This would mean an increase from 3.2 million to approximately four million.

A range of enrollments, rather than a single series of estimates, may be more useful for planning as it gives an indication of the probable limits of the future school load. Table II was prepared to show a high estimate of elementary school enrollments. It was estimated from a Census Bureau maximum projected population based on "low" mortality, "high" birth rate, and "high" net immigration assumptions. On a national basis the main factor in elementary school enrollments is the number of live births each year. The high projections of population in Table II followed the assumption that the number of live births would continue at approximately 3.8 million per year. On total elementary school enrollment the two series of estimates differ by about three million children in school by 1959-60. Probably, the enrollment, when the time comes, will fall somewhere in between the two series.

High School Enrollments

For purposes of estimating enrollments the high school group consists of students in grades nine through 12. In addition, a few postgraduate students are in this group as it is reported by the Office of Education. The four years of population that correspond to the high school grades are the ages 14 to 17. In actuality the com-

TABLE I

ELEMENTARY SCHOOL ENROLLMENTS (KINDERGARTEN THROUGH GRADE VIII) IN THE UNITED STATES PROJECTED TO 1960

School year	Population 5–13 years of age* (in thousands)	Total enrollment (in thousands)	Per cent of population 5–13 years of age	Public school enrollment (in thousands)	Nonpublic school enrollment (in thousands)	Per cent of total enrollment
1	2	3	4	5	6	7
1929–30	22,267	23,514	105.6	21,279	2,235	9.5
1939–40	19,956	20,985	105.2	18,832	2,153	10.3
1945–46	20,105	19,937	99.2	17,678	2,259	11.3
1947–48	21,433	20,742	96.8	18,291	2,451	11.8
1949–50	22,491	22,113	98.3	19,405	2,708	12.2
1950–51	23,286	22,739	97.7	19,901	2,838	12.5
1951–52	24,787	23,503	94.8	20,529	2,974	12.7
1952–53	25,982	25,044	96.4	21,832	3,212	12.8
1953–54	27,256	26,438	97.0	23,027	3,411	12.9
1954–55	28,418	27,565	97.0	23,982	3,583	13.0
1955–56	29,197	28,321	97.0	24,611	3,710	13.1
1956–57	29,667	28,777	97.0	24,978	3,799	13.2
1957–58	30,153	29,248	97.0	25,358	3,890	13.3
1958–59	30,294	29,385	97.0	25,447	3,938	13.4
1959–60	30,349	29,439	97.0	25,465	3,974	13.5

Sources: Column 2 adapted from U. S. Department of Commerce, Bureau of the Census. *Current Population Reports.* Population Estimates, Series P-25, No. 41; P-25, No. 43; and P-25, No. 64. Washington, D. C.: the Bureau, May 8, 1950; August 10, 1950; and October 3, 1952. Since the figures just before 1950 and after 1951 from the "medium" series of projections in 1950 were running a little higher than the census figures, they were adjusted to conform to census data. The "medium" series of the projections was selected because it appeared to come closest to the actual situation.

Columns 3 and 6 from U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems, 1949–50." *Biennial Survey of Education in the United States: 1948–50.* Washington, D. C.: Superintendent of Documents, Government Printing Office, 1952. Chapter 2, 115 p. For 1950–1953, estimates of the Office of Education were reduced by the per cent the estimate in 1950 was above the official figure. Beyond 1952–53 the figures were estimated by applying the per cents in column 4 to the population in column 2.

Column 4 calculated by the NEA Research Division. Beyond 1952–53 the per cents are based on the assumption that the ratio of elementary school enrollments to 5- to 13-year-olds will fluctuate between 96 and 98 per cent.

Column 5 from U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems, 1949–50." *Biennial Survey of Education in the United States: 1948–50.* Washington, D. C.: Superintendent of Documents, Government Printing Office, 1952. Chapter 2, 115 p. Figures for 1950–51 are from the difference between columns 6 and 3.

Column 7 calculated by the NEA Research Division. After 1952–53 the per cents are based on the assumption that the ratio of nonpublic school enrollment to total enrollment will approximate the rate of growth of the earlier years.

* Population figure is for July 1 at the end of the school year.

TABLE II

ESTIMATES OF ELEMENTARY SCHOOL ENROLLMENTS (KINDERGARTEN THROUGH GRADE VIII) IN THE UNITED STATES TO 1960 BASED UPON "HIGH" PROJECTIONS OF SCHOOL-AGE POPULATION

School year	Population 5–13 years of age* (in thousands)	Total enrollment (in thousands)	Per cent of population 5–13 years of age	Public school enrollment (in thousands)	Nonpublic school enrollment (in thousands)	Per cent of total enrollment
1	2	3	4	5	6	7
1953–54	27,347	26,527	97.0	23,105	3,422	12.9
1954–55	28,579	27,722	97.0	24,118	3,604	13.0
1955–56	29,640	28,751	97.0	24,985	3,766	13.1
1956–57	30,562	29,645	97.0	25,732	3,913	13.2
1957–58	31,647	30,698	97.0	26,615	4,083	13.3
1958–59	32,542	31,566	97.0	27,336	4,230	13.4
1959–60	33,494	32,489	97.0	28,103	4,386	13.5

Sources: Column 2 from U. S. Department of Commerce, Bureau of the Census. *Illustrative Projections of the Population of the United States, 1950 to 1960.* Current Population Reports, Population Estimates, Series P-25, No. 43. Washington, D. C.: the Bureau, August 10, 1950. 12 p.

See explanation of column 2 in Table I.

Column 3 calculated by t e NEA Research Division by applying the per cents in column 4 to the population in column 2.

Column 4 from Table I.

Column 5 is the difference between columns 6 and 3.

Column 6 calculated by the NEA Research Division by applying the per cents in column 7 to the total enrollment in column 3.

Column 7 from Table I.

* Population figure is for July 1 at the end of the school year.

parison is not completely true because the age of high school students varies widely and does include some 13-, 18-, and 19-year-olds as well as others. However, most of the enrollment comes from the 14- to 17-year-old group.

Table III shows high school enrollment for selected years in the past and

estimates of future enrollments to 1959-60. While there has been some fluctuation in high school enrollment because of conditions associated with war and national defense activity, the long-term trend has been for increasing numbers of 14- to 17-year-olds to attend high school. About 95 per cent of the 14- and 15-year-olds are in high school, according to the Census Bureau, while only about 75 per cent of the 16- and 17-year-olds are. The latter group then gives the widest margin for increasing the ratio of enrollment to population. Barring unusual disturbances, such as total war, it seems reasonable to expect the ratio to continue to rise but at a decreasing rate. If this assumption holds true, by 1959-60 high school enrollment will be over nine million—about one million higher than were the estimates by the Census Bureau in 1949 and the Office of Education in 1950.

It should be noted that by 1959-60 the increase in high school enrollment, due to the larger number of youth of each age, will be just well under way. A forecast into the 1960's would indicate from two to three million students by the middle of that decade in addition to the nine million at the beginning.

At the high school level the proportion of nonpublic school enrollments to total enrollments has varied widely, but over a period of years has been increasing. The depression years saw a drop, and the years after World War II saw a considerable increase. This group is probably more sensitive to economic conditions than any of the other groups. In Table III it is assumed that the present ratio will hold and perhaps rise a little during the 1950's.

No attempt was made to forecast a "high" series of high school enrollments from a projection of the population because the difference in two projections from differing mortality and migration assumptions on a national basis alone does not produce a wide enough margin to warrant a second series. The current high number of

TABLE III

HIGH SCHOOL ENROLLMENTS (GRADES IX THROUGH XII) IN THE UNITED STATES PROJECTED TO 1960

School year*	Population 14–17 years of age* (in thousands)	Total enrollment (in thousands)	Per cent of population 14–17 years of age	Public school enrollment (in thousands)	Nonpublic school enrollment (in thousands)	Per cent of total enrollment
1	2	3	4	5	6	7
1929–30	9,369	4,740	50.6	4,399	341	7.2
1939–40	9,831	7,059	71.8	6,601	458	6.5
1945–46	8,829	6,187	70.1	5,622	565	9.1
1947–48	8,336	6,255	75.0	5,653	602	9.6
1949–50	8,234	6,379	77.5	5,707	672	10.5
1950–51	8,309	6,493	78.1	5,841	652	10.0
1951–52	8,618	6,518	75.6	5,843	675	10.4
1952–53	8,847	6,619	74.8	5,917	702	10.6
1953–54	8,989	6,787	75.5	6,061	726	10.7
1954–55	9,272	7,075	76.3	6,311	764	10.8
1955–56	9,681	7,454	77.0	6,642	812	10.9
1956–57	10,478	8,152	77.8	7,255	897	11.0
1957–58	11,112	8,723	78.5	7,763	960	11.0
1958–59	11,464	9,091	79.3	8,091	1,000	11.0
1959–60	11,570	9,256	80.0	8,238	1,018	11.0

Sources: Column 2 adapted from U. S. Department of Commerce, Bureau of the Census. *Current Population Reports.* Population Estimates, Series P-25, No. 41; P-25, No. 43; and P-25, No. 64. Washington, D. C.: the Bureau, May 8, 1950; August 19, 1950; and October 3, 1952. See explanation of column 2 in Table I.

Columns 3 and 6 from U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems, 1949–50." *Biennial Survey of Education in the United States: 1948–50.* Washington, D. C.: Superintendent of Documents, Government Printing Office, 1952. Chapter 2, 115 p. See explanation of columns 3 and 6 in Table I.

Column 4 calculated by the NEA Research Division. After 1952–53 the per cents are based on the assumption that since over a period of years the ratio of high school enrollment to population ages 14 to 17 has been increasing at a decreasing rate, it would therefore be about 80 per cent by 1960. Figures for the intermediate years are interpolated.

Column 5 from U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems, 1949–50." *Biennial Survey of Education in the United States: 1948–50.* Washington, D. C.: Superintendent of Documents, Government Printing Office, 1952. Chapter 2, 115 p. After 1949–50 figures are from the difference between columns 6 and 3.

Column 7 calculated by the NEA Research Division. After 1952–53 the per cents are based on the assumption that the ratio of nonpublic high school enrollment to total high school enrollment will be firm and rise a little more than it is at present.

* Population figure is for July 1 at the end of the school year.

births will not affect enrollment in high school before 1960.

Public School Enrollments

Figure I shows in graphic terms the load on the public schools from 1945-46 to 1959-60. Total public school enrollment in kindergarten through grade 12 was 23.3 million in 1945-46; this enrollment has been increasing ever since and promises to rise to somewhere between 33.7 million and 36.3 million by 1959-60. Whether enrollments continue upward after this latter year will depend primarily upon the number of children born after 1952. Most of this change occurred and will occur in public elementary school enrollments for the years under consideration. The two curves, total and elementary only, almost parallel each other. At the present time enrollments in public high schools are only beginning a definite upward turn. By 1959-60, judging from present conditions, over two million more students will be in public high schools.

Enrollments in State and Local School Systems

BECAUSE American schools are decentralized, prospective school enrollments are of immediate importance to future plans of state and local school authorities. While enrollments are not the only factor that must be taken into consideration in planning school facilities and school programs, they are at least a vital part of needed information to make plans complete. Some states, through the state department of education, are keeping a close check on enrollment trends, and surveys of local school systems usually include a prognostication of several characteristics, including enrollments.

Common Problems

The basic questions involved in projecting enrollments at the national level are common also to state and local school systems. But different conditions may necessitate various approaches to seeking the answers. If enrollments are to be projected for nonpublic as well as for public schools, five distinct types of information are required: (1) a census, (2) migration of population, (3) past enrollments, (4) school policy on promotion and effect of school program on holding power, and (5) attendance at nonpublic schools.

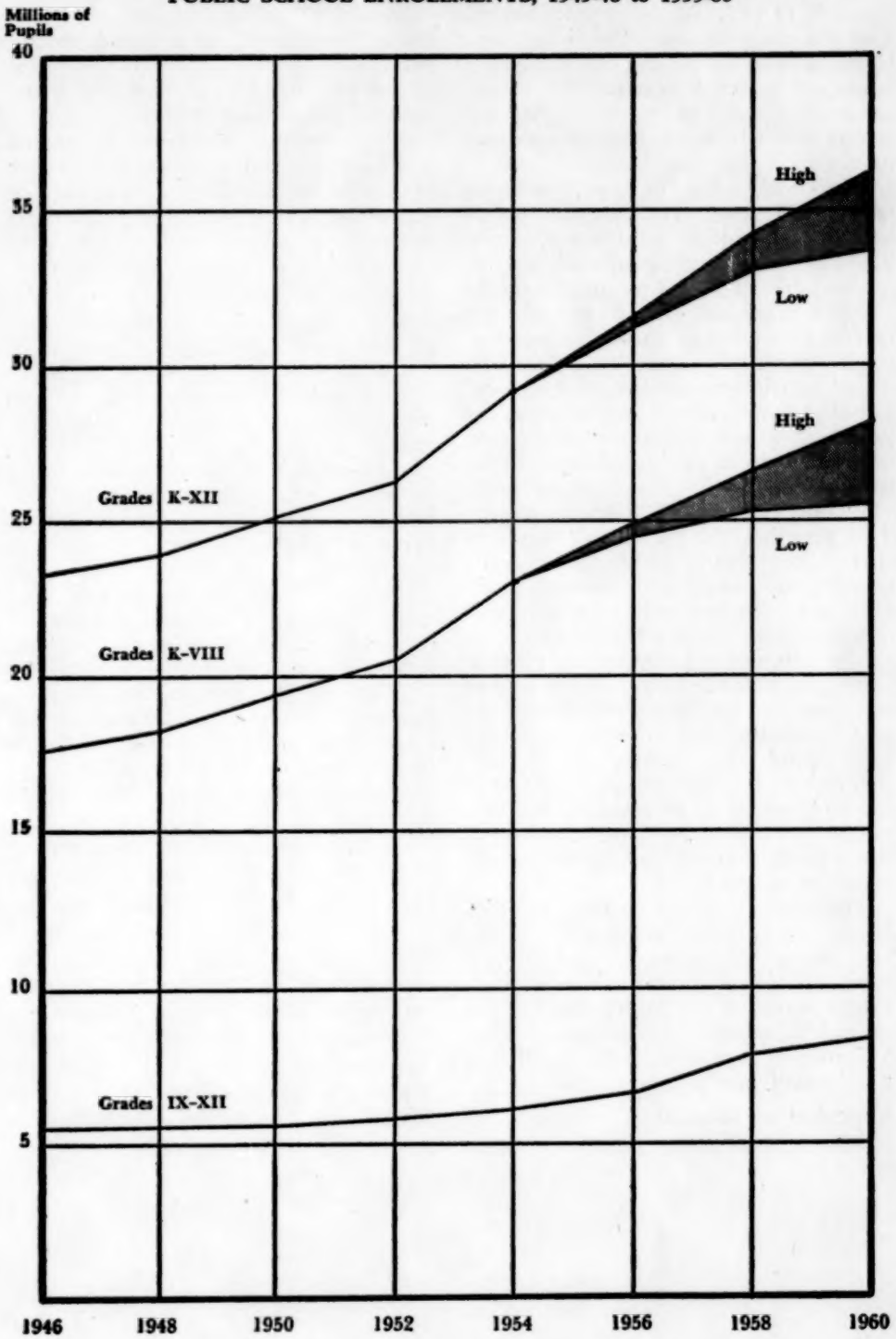
Census. The census may be nothing more than a record of live births over a period of years, or it may be a count of the population for various groups of ages up through 24 years of age, or it may be a combination of the two. In the case of state and national figures usually as complete a census as possible is used. Often in local school districts only the number of births to resident parents or births in an area comparable to the school district is used as a measure of change in the population.

On the local school district basis and on the state level the use of the school census has been severely criticized, perhaps rightly. The fault has been underenumeration in ages before six or seven and after 15 or 16. Since the goal in a census is an accurate head count, it would seem that during this time of increasing enrollments effort to increase the accuracy of the school census would bear results. Some local school districts have extended the school census downward to birth, and with careful supervision by personnel in the child accounting division of the central office have developed an invaluable body of information.

Migration. At the national level migration is a negligible factor in the usual school ages, but may be the main cause of either increasing or decreasing school enrollments in a state or in local school districts. States have used information from the Census Bureau and from independent state studies on migration. The New York State Department of Education has suggested a migration ratio determined from school census data that is suitable for use by local school systems. Migration is estimated by comparing the number of

FIGURE I

PUBLIC SCHOOL ENROLLMENTS, 1945-46 to 1959-60



children eight through 13 years of age with the number of children seven through 12 years of age a year earlier. The difference in size of the two groups is considered to be migration. These years are selected because the school census is usually most reliable for the group well within the ages of compulsory school attendance.

Past enrollments. Information about past enrollments gives another essential for a projection of enrollments. The simplest form of projection relates the number of births to enrollment in the first grade six years later and then carries this number through each successive grade of school by its proportional relation to the preceding grade. Usually an average of several years experience is used to determine the rate in each step of the operation. Sometimes larger grade groupings are used.

School policy and holding power. The promotional policy will have an effect on school enrollments. Most enrollment projections assume, however, that the rate of retardation will remain about constant and make no special allowance for it. On the other hand, the holding power of the school can become an important factor in school enrollments, particularly at the high school level. Changes in the curriculum and other circumstances that can be expected to increase the holding power of the school are considered when projections of high school enrollment are made.

Attendance at nonpublic schools. Many communities have both public and nonpublic schools, and enrollments in either are subject to change. When planning for future enrollments in public schools, an estimate of attendance at nonpublic schools will be a necessary part of those plans.

Appraisal of Method

The method used in all projections of school enrollment is some form of experience ratio, such as births to enrollment, population of school age to school enrollment, or a census by age enrolled in school carried forward. Use of a single ratio implies that migration, holding power, and attendance at nonpublic schools will remain in a constant relationship. When these factors are known to be changing, an estimate of one or all is proposed as an additional ratio.

No single procedure has been outlined or recommended because no clear-cut superiority of one procedure as compared with another has been found up to this time. Certain limitations appear to be associated with all the procedures that have been followed. Forecasting accuracy decreases rapidly with the length of the period of projections. For projections of enrollments in elementary schools beyond five years, additional assumptions about the number of births in future years give added reason for less reliable forecasts. Experience has shown that forecasts for stable communities are less prone to inaccuracy than those for rapidly growing communities. Furthermore, a forecast of total school enrollment tends to be more nearly accurate than a forecast by grade, or even an elementary school and a high school forecast.

With these limitations, the question "what's the use?" becomes a natural conclusion. However, that conclusion cannot be permitted. Well-informed school authorities need estimates of enrollments and are urged to continue making them and having them made. To improve the reliability of forecasts, emphasis should be placed on increasing the accuracy of the source data. Eventually, greater trustworthiness of the data will be achieved.

TEACHER FORECAST FOR THE PUBLIC SCHOOLS

Research Division, National Education Association

PROJECTING school enrollments makes it possible to estimate the number of classroom teachers that will be needed to educate the oncoming generations. On the basis of information on future enrollments in the article, "The Outlook for School Enrollments," this interpretation in terms of teaching positions is presented.

For persons about to enter the teaching profession, the forecast indicates job opportunities in abundance, particularly for those prepared to teach in elementary schools. For employing authorities and the public, the forecast means that the challenge to staff the nation's schools with well-qualified classroom teachers promises to be greater than ever before. Those who have been keeping a check on the pulse of supply and demand have indicated in the past year that the situation has taken a turn for the worse, and this forecast will show why.

The NEA Research Division provides in the accompanying article estimates, which when examined in the light of the 1953 report of teacher supply and demand, should prove invaluable to teacher-education institutions, guidance workers, and those concerned with providing an adequate flow of qualified teachers for the schools.

Total Number of Teachers

THE usual procedure in estimating the number of classroom teachers that will be needed in future years is to divide the projected enrollment by the average number of pupils enrolled per teacher. This method assumes that facilities must be provided for the total number of pupils that can be expected in school. In Table I, however, a variation was used—the number of pupils in average daily attendance per teacher. In the past this ratio has been more stable than that of pupils enrolled to teachers. Therefore, it would seem to hold a slight advantage in estimating teaching positions for the future. To illustrate:

Year	*Enrollment per teacher*	*ADA per teacher*
1929-30	30	25
1939-40	29	25
1949-50	28	24
1952-53	28	25

While the difference produced by the two procedures is not great, by 1959-60 if a rate of 28 pupils enrolled per teacher were postulated, the total number of classroom teachers would be estimated at about 8,000 more than is shown in Table I.

Just as a number of conditions had to be considered in estimating future enrollments, cognizance must be taken of several factors in forecasting the teachers needed in the public schools. Pupil attendance at school has been growing better over the long run. However, it is approaching the upper limit to which it can improve, and probably will fluctuate somewhere near its present position. In 1949-50, the last year for which official figures are available, average daily attendance was 88.7 per

TABLE I

FORECAST OF TEACHERS NEEDED IN THE PUBLIC SCHOOLS

School year	Total enrollment (thousands)	Average daily attendance (thousands)	Per cent ADA is of enrollment	Ratio of ADA to classroom teachers	Total classroom teachers	Increase each year over preceding year, from 1952-53	Cumulative increase, from 1952-53
1	2	3	4	5	6	7	8
1929-30	25,678	21,265	82.8	25	854,263	.....	.....
1939-40	25,433	22,042	86.7	25	875,477	.....	.....
1945-46	23,300	19,849	85.2	24	831,026	.....	.....
1947-48	23,944	20,910	87.3	24	860,678	.....	.....
1949-50	25,112	22,284	88.7	24	913,671	.....	.....
1950-51	25,742	22,833	88.7	24	933,274	.....	.....
1951-52	26,372	23,392	88.7	24	956,458	.....	.....
1952-53	27,749	24,613	88.7	25	981,094	.....	.....
1953-54	29,088	25,801	88.7	25	1,032,000	50,906	50,906
1954-55	30,293	26,870	88.7	25	1,075,000	43,000	93,906
1955-56	31,253	27,721	88.7	25	1,109,000	34,000	127,906
1956-57	32,233	28,591	88.7	25	1,144,000	35,000	162,906
1957-58	33,121	29,378	88.7	25	1,175,000	31,000	193,906
1958-59	33,538	29,748	88.7	25	1,190,000	15,000	208,906
1959-60	33,703	29,895	88.7	25	1,196,000	6,000	214,906

Sources: Column 2 is the sum of enrollments in public elementary and secondary schools from Table I of "The Outlook for School Enrollments" in this issue of the *Journal of Teacher Education.*

Columns 3 and 4 through figures for 1949-50 are from: U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems, 1949-50." *Biennial Survey of Education in the United States: 1948-50.* Washington, D. C.: Superintendent of Documents, Government Printing Office, 1952. Chapter 2, Table II, p. 15. After 1949-50 the ADA is estimated at 88.7 per cent of the enrollment.

Column 5 is the ratio of classroom teachers, column 6, to ADA, column 3. After 1952-53 the ratio is estimated to continue at 25 to 1.

Column 6 is from: U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems." *Biennial Survey of Education in the United States.* Washington, D. C.: Superintendent of Documents, Government Printing Office. Chapter 2, 1929-30, Table 11, p. 54; 1939-40, Table 5, p. 54; 1945-46, Table 5, p. 34; 1947-48, Table 5, p. 38; and 1949-50, Table 5, p. 36. Figures for 1950 through 1953 are from: National Education Association, Research Division. *Advance Estimates of Public Elementary and Secondary Schools for the School Year 1952-53.* Washington, D. C.: the Association, November 1952, p. 6. After 1952-53 the figures are estimated at a ratio of 25 pupils in ADA per teacher.

Column 7 and 8 are computed from column 6.

cent of enrollment. This rate of attendance is used throughout the estimates. While the average daily attendance was growing better, the number of pupils in average daily attendance per teacher dropped from 25 to 24. The current pressure of increasing enrollments has again forced this ratio to 25 to 1. It is assumed that since this ratio has been relatively stable, the force of increasing enrollments will be offset by the desire to hold the size of classes down and the ratio will continue at 25.

Table I, then, directly reflects these assumptions and gives an estimate of the number of teaching positions necessary to meet the increases in enrollment alone. The information concerns jobs in public schools only, because the available basic statistics are more nearly complete and because the major task confronting public authorities is indicated more clearly. Disregarding other factors, it is a statement of what is likely to be the trend in total number of public school teaching positions through 1959-60.

According to the forecast the number of classroom teachers in the public schools will increase from nearly one million at present to about 1.2 million in 1959-60. The child population of today ensures that in the next five years over 30,000 additional teachers will be needed annually to properly care for the instruction of the additional pupils. The number of new positions needed probably will drop off in the two succeeding years.

Additional Factors

BURIED within the total number of teaching positions are conditions which should be recognized.

Replacements. Every year a certain number of teachers are replacements for those who have retired, accepted other employment, or left teaching for other reasons. Recent estimates of this number vary from about five to nine per cent of the number of positions. A realistic view of the need for class-

room teachers must take into account the number of replacements needed as well as the number of teachers needed to care for increased enrollments. Without applying the estimated replacement per cents to the number of teaching positions for all the years shown in Table I, a minimum estimate of replacements at the present time runs well over 50,000 a year.

Organization. A second additional factor is the problem of what happens to teaching positions through organizational policies—school district reorganization and overcrowded classrooms. School district reorganization can reduce the need for classroom teachers, or permit new educational services without an increase in the number of teachers. On the other hand, where the problem of overcrowded classrooms occurs, a reduction in pupil-teacher ratio of only one may not be feasible for lack of space or funds. No estimate for these conditions is made in the forecasts; the constant ratio assumes that the forces involved tend to cancel each other out in the same relative way from year to year.

Substandard Certificates. A third consideration concerns the quality of the teaching staff. Although a teacher's certificate does not mean that the same standard of preparation has been met in the several states, the issuance of substandard certificates on a year-to-year basis gives evidence of the trend in the shortage of teachers, and is a rough indication as to whether the quality of the total group is improving or growing worse. The NEA Research Division's *Advance Estimates of the Public Elementary and Secondary Schools* (issued in the fall of every school year) has reported nationwide figures on substandard certificates. The reported number since 1945-46 has been:

Year	*No. of substandard certificates*
1945-46	115,000-120,000
1946-47	110,000-115,000
1947-48	112,401
1948-49	105,267
1949-50	95,146
1950-51	75,079
1951-52	69,848
1952-53	63,649

There was a slow but steady recovery from the tragic lowering of standards during World War II. Perhaps almost all the recovery has been made by members of this group who meet the standard qualifications in their respective states through the various types of in-service training available to them. The figures in Table I do not allow for any positions which might be made available by replacing persons with substandard certificates. If the total progress for the last seven years can be duplicated in the next seven years, this factor will disappear. However, the reduction in substandard certificates in 1952-53 was comparatively less than in several preceding years. It is also true that if substandard certificates disappear, this accomplishment will not signify that the related problem of a minimum of four years of college training for elementary school teachers will have been solved.

"High" Forecast

IN THE report on projected school enrollments a high forecast was developed to give an idea of a probable range within which actual enrollments will fall. If the high forecast materializes, it will mean that even more classroom teachers will be needed than is indicated in Table I. Following the same basic assumptions as were used in the low estimate of classroom teachers needed, Table II shows a high forecast that is about 100,000 teaching positions more than the low forecast. By 1959-60, to staff the public schools at the current pupil-teacher ratio, the enrollment would require about 1.3 million teachers. The difference in the two forecasts appears mainly in the

TABLE II

"HIGH" FORECAST OF TEACHERS NEEDED IN THE PUBLIC SCHOOLS

School year	Total forecast "high" enrollment (thousands)	Average daily attendance (thousands)	Per cent ADA is of enrollment	Ratio of classroom teachers to ADA	Total estimated classroom teachers	Increase each year over preceding year	Cumulative increase	Difference between estimates of teachers needed
1	2	3	4	5	6	7	8	9
1952–53	27,749	24,613	88.7	25	981,094	.....	.....	.....
1953–54	29,166	25,870	88.7	25	1,035,000	53,906	53,906	3,000
1954–55	30,420	26,991	88.7	25	1,080,000	45,000	98,906	5,000
1955–56	31,637	28,053	88.7	25	1,122,000	42,000	140,906	13,000
1956–57	32,987	29,259	88.7	25	1,170,000	48,000	188,906	26,000
1957–58	34,378	30,493	88.7	25	1,220,000	50,000	238,906	45,000
1958–59	35,427	31,424	88.7	25	1,257,000	37,000	275,906	67,000
1959–60	36,341	32,234	88.7	25	1,289,000	32,000	307,906	93,000

Sources: Column 2 is the sum of the "high" estimates of enrollments in public elementary and secondary schools from Table II of "The Outlook for School Enrollments" in this issue of the *Journal of Teacher Education.*

Column 3 was computed from columns 2 and 4.

Columns 4 and 5 were taken from Table I.

Column 6 was computed from columns 3 and 5.

Columns 7 and 8 are computed from column 6.

Column 9 is the difference between column 6 of this table and column 6 of Table I.

three years from 1957-58 to 1959-60. The current cycle of need for teachers due to increased enrollments seems destined to be carried further into the future.

Elementary and Secondary

THE need for classroom teachers is not the same in every grade, but increases and decreases in a pattern similar to that of enrollment. However, a division of teachers by grade is impractical because many teachers teach several grades. Probably about four groupings of teachers would give the best description of the need for teachers as far as the rise and fall in enrollment is concerned, but on a national scale information on only two groupings is readily available.

Between the two common groupings —elementary school and high school teachers—there is not a clear line of demarcation because of the variations among school systems in classifying grades seven and eight. Sometimes they are part of the elementary school and in other school systems they are part of the junior high school. Teachers in the junior high school are usually classified as high school teachers when only two classifications are used to describe the total number of classroom teachers. Reporting on a national basis appears to be fairly consistent on this question, and about 35 per cent of the teachers have been classified as high school teachers, as shown in Table III, and 65 per cent as elementary school teachers. In 1951-52 and in 1952-53 the per cent of elementary school teachers has been 66 per cent because of the higher relative increase in elementary school enrollment. This proportion will probably continue several years until increasing numbers of students reach the high school, and then the per cent can be reasonably expected to drop back. This assumption is the basis of the division of total classroom teachers into the two groups in Table III.

Because of increasing enrollments alone, the number of elementary school teachers will increase from about 650,000 in 1952-53 to about 780,000 teachers by 1959-60—a total increase of 130,000 in the teaching staff of the elementary schools. In high schools, the number will need to increase from 335,000 teachers currently employed to approximately 420,000 by 1959-60.

TABLE III

TEACHERS IN ELEMENTARY AND SECONDARY SCHOOLS

School year	Total classroom teachers	Elementary school teachers	Per cent elementary school teachers are of total teachers	High school teachers
1	2	3	4	5
1945–46	831,026	541,528	65	289,498
1947–48	860,678	554,939	64	305,739
1949–50	913,671	589,578	65	324,093
1950–51	933,274	608,131	65	325,143
1951–52	956,458	627,285	66	329,173
1952–53	981,094	646,111	66	334,983
1953–54	1,032,000	681,120	66	350,880
1954–55	1,075,000	709,500	66	365,500
1955–56	1,109,000	731,940	66	377,060
1956–57	1,144,000	755,040	66	388,960
1957–58	1,175,000	763,750	65	411,250
1958–59	1,190,000	773,500	65	416,500
1959–60	1,196,000	777,400	65	418,600

Sources: Column 2 is from Table I of this article and is the low estimate.

Column 3 through 1949–50 is from: U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems." *Biennial Survey of Education in the United States.* Washington, D. C.: Superintendent of Documents, Government Printing Office. Chapter 2, 1945–46, Table 5, p. 34; 1947–48, Table 5, p. 38; 1949–50, Table 5, p. 36. Figures for 1950 through 1953 are from: National Education Association, Research Division. *Advance Estimates of Public Elementary and Secondary Schools for the School Year 1952–53*, p. 6. After 1952–53 the figures are estimated from the per cents in column 4.

Column 4 is the per cent that column 3 is of column 2 through 1952–53. After that date it is estimated that the per cent will continue at 66 until 1957–58 when it will again drop to 65.

Column 5 is the difference between columns 2 and 3.

TABLE IV

FORECAST OF PROFESSIONAL PERSONNEL OTHER THAN TEACHERS NEEDED IN THE PUBLIC SCHOOLS

School year	Total classroom teachers	Ratio of classroom teachers to other professional staff	Professional staff [a] other than classroom teachers
1	2	3	4
1929–30	854,263	14	62,957
1939–40	875,477	16	54,991
1945–46	831,026	15	55,079
1947–48	860,678	12	69,814
1949–50	913,671	13	71,009
1950–51	933,274	13	71,790
1951–52	956,458	13	73,574
1952–53	981,094	13	75,469
1953–54	1,032,000	13.5	76,400
1954–55	1,075,000	14	76,800
1955–56	1,109,000	14	79,200
1956–57	1,144,000	14	81,700
1957–58	1,175,000	14	83,900
1958–59	1,190,000	14	85,000
1959–60	1,196,000	14	85,400

Sources: Column 2 is from Table I of this article and is the low estimate.

Column 3 is the ratio of column 2 to column 4 through 1949–50. Thereafter the pressure of increasing enrollments is estimated to increase the ratio to 14 to 1 by 1954–55.

Column 4 consists of principals, supervisors, city and county superintendents and their professional staffs. The figures through 1949–50 are the sum of the three components from: U. S. Office of Education, Federal Security Agency. "Statistics of State School Systems." *Biennial Survey of Education in the United States.* Washington, D. C.: Superintendent of Documents, Government Printing Office. Chapter 2, 1929–30, Table 18, p. 62; 1939–40, Table 2, p. 48, data on county and city superintendents is for the 1941–42 school year, Table 5, p. 54; 1945–46, Table 2, p. 29, Table 5, p. 34; 1947–48, Table 2, p. 32, Table 5, p. 38; 1949–50, Table 2, p. 30, Table 5, p. 36. After 1949–50 the figures are estimated by the ratios indicated in column 3.

[a] Includes superintendents and their administrative staffs, principals, and supervisors.

Other Professional Staff

WHILE the number of principals and supervisors responds more directly to increasing enrollments than does the number of superintendents, Table IV includes superintendents of both basic and intermediate school districts and their professional staffs. This was done for two reasons: first, to increase the size of the total because estimating with large numbers is likely to be more nearly accurate than estimating with small numbers; and second, to present a complete picture. Virtually all of this group have had some experience in the classroom. Their positions represent a need for teachers because they leave a vacancy when they move up the educational ladder.

The number of classroom teachers per other professional staff has fluctuated fairly widely around an average of 14. For 1949-50, the last year of available official figures, the ratio was 13 to 1. Chances are that with increasing enrollments the ratio will increase to at least 14 to 1. Upon this assumption, Table IV was developed.

The forecast shows an increase from about 75,000 in 1952-53 to about 85,000 in 1959-60. A few more than 20,000 constitute superintendents and their administrative staffs and should be subtracted from the total number if an approximation of the number of supervisors and principals only is desired.

What Next?

THROUGHOUT this presentation emphasis has been deliberately placed on forecasting the probable number of teaching positions that will exist each year through 1959-60; thus the over-all task of staffing the public schools is outlined. Within this major topic the problems of teacher turnover, staff needed if desirable conditions are obtained, and getting a better trained staff were briefly mentioned. The challenge of improving conditions lies with state school authorities, with teacher-education institutions, with local school authorities, and with the public generally; much remains to be done. A detailed consideration of teacher supply and demand is reserved for the annual study.

THE SHORTAGE OF SPECIAL CLASS TEACHERS IN LARGE CITIES

Sidney H. Firestone and Jacob S. Orleans

THIS article summarizes the report of a survey conducted in 1951 of special class needs in 108 cities in the United States with populations of over 100,000.[1] A questionnaire was sent to the director of special education in each of the cities requesting information concerning: (1) types of classes; (2) number of teaching positions; (3) teacher shortages; (4) salary differentials; (5) professional preparation; (6) methods of recruiting teachers; (7) opportunities for professional preparation. Responses were received from 77 of the 108 cities, which is a relatively large return for a study of this type.

Sometimes obscured in discussions of teacher shortages are the needs arising from rapidly expanding programs of special education. This is an area of school services which the nation cannot afford to have retarded. Development of such services, already far short of actual need, to the point that educational provisions are made for every handicapped child is imperative. The accompanying article, therefore, contributes appropriately to consideration of "Teachers For Our Schools."

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Types of Classes for Handicapped Children

CLASSES for handicapped children may be grouped under two major categories, the physically handicapped and the mentally and emotionally handicapped. Classes for the physically handicapped children include the following types: (1) blind; (2) cardiac; (3) cerebral palsy; (4) deaf and hard of hearing; (5) health improvement and malnourished; (6) orthopedic; (7) blind and partially sighted; (8) speech (speech improvement, speech correction, speech therapy, cleft palate); and (9) tuberculosis. Those for the mentally and emotionally handicapped include: (1) emotionally disturbed (socially maladjusted); (2) epileptic; (3) remedial reading; and (4) retarded mental development. Those children who are either homebound or in hospitals should perhaps be included under the physically handicapped.

Table I shows large differences between the two groups of cities in types of special classes and the per cent of cities furnishing different types of special classes. The larger cities have more kinds of classes. No type of class for the handicapped is provided in a larger percentage of the small cities than of the larger ones. There were no consistent differences among the cities when grouped by geographical regions in their provision for special education.

The cities differ in total provision of special classes. The arithmetic mean of the 16 areas listed, in which special classes are furnished, is 7.2 of the smaller cities as compared to 9.8 for the larger cities. The difference is, perhaps, to be expected. The number of handicapped children, particularly of certain types, in the smaller cities may not be sufficient to justify special class treatment. The data presented take no ac-

[1] The complete report of the study appears as Publication No. 11, Office of Research and Evaluation, Division of Teacher Education, College of the City of New York, 1952.

TABLE I

NUMBER OF CITIES FURNISHING VARIOUS TYPES OF SPECIAL CLASSES FOR HANDICAPPED CHILDREN, BY SIZE OF CITY

Type of special classes	*Group A* [1] Number	Per cent	*Group B* [1] Number	Per cent	*Total* Number	Per cent
Physically Handicapped						
Speech	38	81	29	97	67	87
Sight Conservation	38	81	25	83	63	82
Deaf and Hard-of-Hearing	33	70	29	97	62	81
Orthopedic [2]	28	60	27	90	62	81
Cerebral Palsy [2]	29	62	19	63	48	62
Health Improvement and Malnourished	14	30	14	47	28	36
Blind	7	15	13	43	20	26
Tuberculosis	3	6	11	37	14	18
Lip Reading	1	2	4	13	5	6
Cardiac	2	4	2	7	4	5
Mentally and Emotionally Handicapped						
Retarded Mental Development	41	87	30	100	71	92
Remedial Reading	22	47	18	60	40	52
Emotionally Disturbed (Socially Maladjusted)	11	23	10	33	21	27
Epileptic	3	6	5	17	8	10
Homebound [3]	39	83	27	90	66	86
Hospital [3]	27	57	30	100	57	74
Miscellaneous [4]	4	9	4	13	8	10
GRAND TOTAL	47		30		77	

[1] Group A—cities of 100,000–250,000 population; Group B—cities of 250,000 and over.
[2] Nine cities indicated that classes for cerebral palsy and orthopedic are combined. They are included in both categories of the tabulation.
[3] Six cities indicated that classes for homebound and hospital are combined. They are included in both categories of the tabulation.
[4] This category includes classes for educational retardation, mixed handicapped, physical problems, sanitoria, and child-study.

count of provision for special education by agencies other than the public schools. Moreover, the numerical adequacy of provision is in no way implied in these and subsequent data.

Number of Teaching Positions

OF THE 7,436 teaching positions in special classes during the spring semester of 1951 (in the 77 cities that responded), the 30 larger cities had 6,218 teaching positions while the 46 smaller cities had 1,218.

Assuming that the number of teaching positions should be roughly proportionate to the total population represented, it would appear that the northeastern cities are appreciably above the average for the nation in number of special class teaching positions; the western cities are somewhat above average; and the north central cities are somewhat below average. The provision for special classes is much less in the southern cities than in other sections of the nation.

Teaching positions in classes for handicapped children constitute an average of 4.6 per cent of all teaching positions. Cities in Group A (100,000-250,000) allocate an average of 4.8 per cent of their total teaching positions to classes for handicapped children, while the cities in Group B (250,000 and over) allocate an average of 3.6 per cent. The northeastern cities allocate an average of 5.2 per cent of all teach-

TABLE II

NUMBER OF TEACHING POSITIONS FOR EACH TYPE OF SPECIAL CLASS, BY SIZE OF CITY

Type of special classes	*Group A* Number	Per cent	*Group B* Number	Per cent	*Total* Number	Per cent
Physically Handicapped						
Speech	105	9	401	6	506	7
Sight Conservation	54	4	323	5	377	5
Deaf and Hard-of-Hearing	75	6	396	6	471	6
Orthopedic	60	5	378	6	438	6
Cerebral Palsy	45	4	102	2	147	2
Health Improvement and Malnourished	29	2	392	6	421	6
Blind	11	1	50	1	61	1
Tuberculosis	2	*	68	1	70	1
Lip Reading	6	*	12	*	18	*
Cardiac	3	*	2	*	5	*
Mentally and Emotionally Handicapped						
Retarded Mental Development	432	35	2,764	44	3,196	43
Remedial Reading	71	6	385	6	456	6
Emotionally Disturbed (Socially Maladjusted)	23	2	155	2	178	2
Epileptic	3	*	19	*	22	*
Homebound	238	20	586	9	824	11
Hospital	47	4	172	3	219	3
Miscellaneous	14	1	13	*	27	*
TOTAL	1,218	100	6,218	100	7,436	100
Northeast [1] (18)	615	51(7)	3,034	49(25)	3,649	49
North Central (10)	262	22(10)	1,739	28(20)	2,001	27
South (12)	217	18(6)	266	4(18)	483	7
West (6)	124	10(7)	1,179	19(13)	1,303	18

[1] Figures in parentheses represent the number of cities reporting.
* Less than .5 per cent.

ing positions (one teacher of every 19) to handicapped children; the cities in the north central region, 4.2 per cent (one teacher of every 24); the southern cities, 2.0 per cent (one teacher of every 50); and the western cities, 4.4 per cent (one teacher of every 23). It is not possible to evaluate the facts presented except in the light of other data. Whether or not the number of classes is adequate can be determined only in terms of the number of classes that should be furnished; that is, in terms of the number of children who require special education in each area.

Shortage of Teachers

A total of 51 (66 per cent) of the 77 cities covered by the survey reported teacher shortages in one or more of the areas of special education for handicapped children. Of the 51 cities reporting shortages, 26 cities are in Group A (55 per cent of all the cities in that category), while 25 cities are in Group B (83 per cent of all the cities in that category). These figures relate to shortages in present teaching positions. Inasmuch as the provision for special education is inadequate, the teacher shortages are even more serious than would appear to be the case.

As expected, teacher shortages are most prevalent in areas in which special education is widely furnished, except for teachers of the blind and emotionally disturbed. The mean number of areas in which cities report shortages of special class teachers is 3.4. During the spring semester of 1951, a total of 573 (7.7 per cent) special classes in 29 (38 per cent) of the 77 cities were

TABLE III

AREAS OF SPECIAL EDUCATION IN WHICH SHORTAGES OF TEACHERS ARE REPORTED, BY SIZE OF CITY

Type of special class	Group A[1]			Group B[1]			Total		
	No. of cities reporting shortage	Total No. of cities reporting	Per cent	No. of cities reporting shortage	Total No. of cities reporting	Per cent	No. of cities reporting shortage	Total No. of cities reporting	Per cent
Deaf and Hard-of-Hearing	11	33	33	14	29	49	25	62	40
Sight Conservation	6	38	16	8	25	32	14	63	22
Speech	7	38	18	7	29	24	14	67	21
Blind	4	7	*	6	13	46	10	20	50
Orthopedic	5	28	18	6	27	22	11	55	20
Cerebral Palsy	6	29	21	3	19	16	9	48	19
Health Improvement and Malnourished	2	14	14	3	14	21	5	28	18
Tuberculosis	2	3	*	1	11	9	3	14	21
Lip Reading	1	1	*	0	4	*	1	5	*
Cardiac	1	2	*	0	2	*	1	4	*
Retarded Mental Development	16	41	39	18	30	60	34	71	48
Retarded Reading	3	22	17	3	18	17	6	40	15
Emotionally Disturbed (Socially Maladjusted)	5	11	45	3	10	30	8	21	38
Epileptic	1	3	*	1	5	*	2	8	*
Homebound	5	39	13	4	27	15	9	66	14
Hospital	1	27	4	4	30	13	5	57	9
Miscellaneous	3	4	*	2	4	*	5	8	*
Northeast	9	19	47	6	7	84	15	26	58
North Central	6	10	60	8	10	80	14	20	70
South	7	12	58	5	6	83	12	18	67
West	4	6	64	6	7	68	10	13	77
TOTAL	26	47	55	25	30	83	51	77	66

[1] Group A—cities of 100,000–250,000 population; Group B—cities of 250,000 and over.
* Based on fewer than 10 cases.

taught by personnel not certified to teach handicapped children. This practice appears to occur more frequently in the smaller cities than in the larger ones, more frequently in the northeastern and north central regions of the nation than in the South, and even less frequently in the West. The very fact that regular class teachers are employed to teach special classes may well be an indication, *per se,* of a teacher shortage.

It would be interesting to know in which special class areas non-certified teachers are assigned to special class teaching. Certainly, with some of the more serious of the physically handicapped, special training in the nature of the impairment is essential. The significance of the use of non-certified teachers is a function of both the nature and extent of the use of them.

Salary Differentials

THIRTY (39 per cent) of the responding cities offer salary differentials ranging from $100 to $500 per year to teachers of handicapped children. Of the 30 cities, 20 were in Group A and 10 were in Group B. Twelve cities in the northeast states, nine in the north central states, eight in the South, and one in the West offer salary differentials to teachers of handicapped children. Of the 30 cities offering differentials, 21 offered differentials of $200 or less per annum, while the remaining nine cities offered differentials of more than $200, or had evolved some type of "sliding scale" which amounted to supplementary payments of more than $200 per annum. Of these 30 cities, the 13 which reported no shortages of teachers of the handicapped offered differentials which were slightly higher than the differentials paid by the 17 cities which reported shortages.

Of the cities that do not offer a salary differential for special class teaching, a somewhat larger per cent (72) have teacher shortages than those cities (57 per cent) that do offer a salary differential. Perhaps equally significant is the fact that almost three-fifths of the

cities which offer a salary differential are experiencing a shortage of special class teachers; three-tenths of those not offering a differential report no shortage. Twenty cities agreed that payment of a salary differential will alleviate the shortage; 19 cities disagreed. However, the opinion was offered that a salary differential would create resentment and a consequent lowering of morale among regular teachers who were not recipients of any salary differentials.

Professional Requirements

CERTIFICATION requirements for teachers of handicapped children vary from city to city. Sixty-six (86 per cent) of the 77 cities responding to the survey require at least one of the following:

1. Thirty cities require preparation beyond the bachelor's degree for certification as a teacher of the handicapped. Requirements range from a master's degree to a bachelor's degree plus courses in a specialized field.
2. Twenty-five cities require only the bachelor's degree with specialized courses included in or supplementing the degree.
3. Twenty-seven cities require between one and three years of regular teaching experience.
4. Thirty-six cities require student teaching.
5. Ten cities require both student teaching and regular teaching experience.
6. Seven cities require regular teaching experience only.
7. One city requires student teaching only.

Of the 30 cities offering salary differentials, 25 cities require teachers of handicapped children to undergo special college training as undergraduates; three cities require regular teaching experience; one city requires student teaching; and one city has no special requirements for teachers of handicapped children. The cities that offer salary differentials recognize the need for special training of teachers of handicapped children. However, it should be remembered that 30 cities require special college training without the benefit of a salary differential.

Of the 51 cities reporting shortages of teachers for the handicapped, 39 require special preparation for certification. Seventeen of these 39 cities are among the 25 cities requiring special undergraduate preparation, while 22 cities are among the 30 requiring special preparation at the graduate level.

Recruiting Teachers of Handicapped Children

THE respondents were asked to check, on a list furnished them, the recruitment procedures currently employed in their respective cities. Of the 77 cities responding, 72 (93 per cent) indicated use of one or more of the procedures listed. An average of 5.5 recruitment procedures is used in the responding cities. The cities reporting no shortage of teaching personnel use an average of 4.7 procedures. Apparently the existence of teacher shortages serves somewhat to stimulate school systems to use a greater variety of procedures for securing teachers. More than two-thirds of the cities try to obtain special class teachers through placement bureaus. Just as common is the practice of using teachers untrained in the teaching of the handicapped, with the provision that they secure the necessary preparation while on the job.

Various general procedures, such as encouraging students who have worked with the handicapped to enter the field, are employed by about one-half of the cities. More direct procedures are used by less than one-half of the cities, some procedures by less than one-fourth of the cities. These include: (1) in-service training of regular teachers; (2) scholarships; (3) influencing college freshmen and sophomores by lecturers; (4) influencing high school graduates by means of orientation programs. It would be helpful if evidence could be obtained concerning the efficacy of each of these procedures.

The cities in the West follow the practice of using teachers untrained in

the teaching of handicapped children to a much lesser degree than do cities in the other three regions. They make more extensive use of placement bureaus and of the practice of urging teachers in the field to be alert for possible candidates. They also provide more commonly for in-service courses for regular teachers who are interested in special education. The cities in the Northeast make much less use of the following methods than do the cities of the other regions: (1) placement bureaus; getting special class teachers to make others conscious of and interested in the field; (2) in-service courses after school hours for regular teachers who are interested in special education; (3) encouraging students who have worked with the handicapped to enter the field; and (4) offering scholarships to regular teachers for study purposes.

No differences were noted in the recruiting methods used by cities experiencing shortages as compared to cities with no teacher shortages.

Opportunities for Professional Preparation

A TOTAL of 34 cities (44 per cent) provide facilities for professional preparation and advancement for teachers of handicapped children—17 cities (36 per cent) in Group A and 17 cities (57 per cent) in Group B. The most prevalent facility provided for professional preparation is in the form of in-service education courses. Other facilities furnished are workshops, special courses, and professional classes. Barely half of the cities reporting teacher shortages furnish professional preparation for special class teachers. Of the cities reporting no shortages of special class teachers, one-third do furnish professional preparation facilities.

A total of 47 cities (61 per cent) have available college and university facilities for preparation of teachers of the handicapped within the city but outside the school system. In a total of 66 cities (86 per cent), facilities are available for the professional preparation of these teachers within the school system itself or in colleges in or near the city, or through both media.

The shortage of special class teachers in New York City, which stimulated the present study, is not unique. Most other large cities also experience shortages of teachers of the handicapped. No one factor stands out as explaining the condition that exists. Differences in requirements for certification, facilities for professional preparation, recruiting procedures, or the payment of salary differentials do not distinguish sharply between cities which report special class teacher shortages and those which do not.

It may well be expected, because of heavy increases in elementary school enrollments, that the shortage of teachers of handicapped children will become much more widespread and intensive during the next decade. This expansion in enrollment will naturally include an increase in the number of handicapped children. It would seem desirable to determine the procedures and devices which have proven effective in recruiting teachers for special education and to uncover other procedures which might be employed. Special class teaching ranks will not be filled by the mere passage of time.

With the Researchers

By Douglas E. Scates

EVALUATIVE STUDIES OF TEACHER EDUCATION

A. S. Barr and Arthur Singer, Jr.

An important aspect of the supply of teachers—the special theme of this issue of the JOURNAL*—is the quality of their preparation. In the highly responsible vocation of teaching, quality is in every sense as important as quantity. To specify all of the qualities of professional leadership desired in each new teacher, however, is more difficult than to specify the number of new teachers needed. Hence it becomes essential to examine unceasingly those educational conditions and processes which it is hoped during college years will bring out and develop the requisite qualities.*

Mr. Barr, Professor of Education at the University of Wisconsin, and long a leader in research in this area, and Mr. Singer, a teaching assistant at the same University, have prepared especially for this issue of the JOURNAL *a summary of recent research which seeks to evaluate various practices in teacher education. This summary represents an extensive canvass of the research literature and brings to a focus the findings of various studies on this particular issue.*—Douglas E. Scates, Editor.

AN IMPORTANT aspect of planning is provision for the evaluation of plans. Until plans are tried and tested they constitute hopes, however intelligent, and not necessarily efficient approaches to the task at hand. When one surveys the situation in teacher education, one finds much planning but little evaluation. The writers of this article have reviewed research literature in the field of teacher education for the 11-year period, 1940-51, to secure information about evaluation studies of preservice programs of teacher education.

Because of space restrictions this report has been limited to representative studies of curriculum, methods, and preservice education practices. Evaluation will be considered at three levels. The first represents a consensus of opinion which presumably will supply insights into the best theoretical thinking about the subject. The second level represents surveys of practice, practice presumably representing that portion of theory for which there is strong enough support to warrant its being put into operation. The third level consists of various forms of follow-up studies which attempt to evaluate the preservice programs in terms of in-service teacher efficiency.

Evaluation Techniques

The results of a tabulation, study by study, of the sources of data or data-gathering techniques employed in the researches summarized in this report are presented below. (Some studies are represented more than once in the list.)

Technique	*Total Number of Times Employed*
1. Testing or examining instruments	32
2. Records of students	27
3. Rating scales or check lists	26
4. Interviews, visitations, or conferences	23
5. Anecdotal records, diaries	19
6. Questionnaires	16
7. Experimental work	11
8. Subjective evaluations	7
9. Panels or juries of authorities or experts	6
10. Bulletins, letters, or catalogs	4
11. Inventories	3
12. Case studies	3
13. Not clearly defined	2
14. Tape recordings, movies	1

From a study of the reports there appears to be an increase in the use of testing or examining instruments since 23 of the 32 studies using tests were published in the period from 1945 through 1951. The use of student records by researchers is quite evenly distributed over the 11-year period, but during the past five years there was a definite increase in the use of rating scales, check lists, interviews, visitations, and conferences. Attempts at balancing or "rounding out" objective data through the use of subjective techniques such as expert opinion, subjective evaluations, etc. seem to be favored by recent investigators.

An analysis of 79 investigations conducted during the 11-year period indicates that 17 were concerned with evaluation of aspects of general education, 30 with professional education, and 32 with areas of specialization.

Representative Studies Using Consensus of Opinion

Several studies of the consensus of opinion type were found. Representative of these was a study by Duflot (27) who found that the suggestion most frequently made by 281 teachers for improving teacher training was that there should be much more practice and much less theory. Bishop (10, 11) reported a group of teacher-education authorities stated that internship programs, in contrast to student teaching, should offer intensive planning experiences, opportunity to prepare materials and to preside over extra-curricular activities, and should place the intern-teacher in a full-time school staff position. He also reported that supervised internship, after graduation, is rare.

Pressy (58) concluded that the essential parts of a teacher preparation program are: (1) an adequate treatment of psychological development, (2) a broad treatment of the psychology of learning, and (3) some consideration of methods of child study. The teachers college should provide a broad and intensive student development program. Stiles (70) favored a longer period of student teaching with the possibility of eight weeks devoted to full-time school and community service. Lestor (45) stated that the teachers of and students in guidance courses expressed the desire that the course in mental hygiene should include additional topics such as juvenile court, lying, stealing, rejection, etc. Patterson (57) in interpreting the Eight-Year Study concluded that teachers' opinions leaned toward less classroom techniques and more training in broad areas such as knowledge of the nature and needs of adolescents. Teachers should have interesting personalities supported by a wide range of interests and experience.

Adams (1) recommended greater emphasis on principles on which interest is based, purposes underlying pupil activity, maturation, mental health, and the nature of motivation in relation to the learning process. According to Grossnickle (32), there is a trend toward the disappearance of college courses in arithmetic, general mathematics, and special methods courses in the same area. Topics that deal with child development, adjustment development of personality, mental health, and learning efficiency are rated highest by Luker (50) who used the opinions of 256 administrators, supervisors, and teachers for determination of content in educational psychology. Blesh (12) concluded from answers to questionnaires by school principals that personality is one of the most important factors in successful teaching in special subject fields. Atherton (6) used a check list opinionnaire in gathering data from 68 educators who felt a great need for improvement of materials and facilities for student teachers. Facilities provided students who aspire to teaching for the purpose of intercultural and minority group education are generally inadequate, according to Caliver (19). Present teacher-education curricula offer few opportunities for prospective teachers to develop community understanding or to improve in ability to solve problems, according to Wolcott (79).

Surveys of Practice

Surveys of practice were somewhat more numerous than were reports of consensus of opinion. According to Lovinger (49), general education requirements have continued to be heavily concentrated in the freshman and sophomore years. In terms of credits, one-fourth to one-third of the average student's four-year program is devoted to general education subjects. He further reported that administrators of the teachers colleges studied stated there is only moderate interest on the part of faculties toward the objectives of general education. (Ten per cent rated their schools as very successful in attaining stated general education objectives while 80 per cent felt the objectives were only partially attained.) Doane (26), in surveying institutional curriculum requirements for the preparation of high school teachers, stated that instruction in general academic courses was provided by four out of five colleges or universities studied. Students in humanities, arts, and special fields such as public health and physical education, as surveyed by Evenden (29) and tested by Campbell (22), are not so well informed concerning contemporary affairs as are the students of academic courses.

Library information received from 31 teacher-education institutions, after testing by Lancaster (42), showed students were weakest in the use and knowledge of the card catalog system and fairly skillful in the selection of library sources. Sunderman's (73) study concerning musical background of 556 freshmen in six teachers colleges in New York revealed that 42 per cent of these students had had no musical training in grades one to eight. Ralya (59) concluded that biology and sociology should be required of all education students. Many investigations have tended to reveal a lack of adequacy with regard to both method and content. Such studies as: Blyler (14), Brink (16), Camp (20), Evans (28), Lange (44), Lins (48), Saucier (63), Stiles (71), and Wenger (76), contain specific reference to this.

In the field of professional education, Williams (77) stated that education students at Heidelberg College (over half of the juniors and seniors) have higher grades, higher average intelligence, and receive more honors than do non-education students. This finding is contrary to the reports from other similar investigations. By contrast, Smith and Eaton (69) reported students enrolled in teacher-education courses seemed to fare less well than liberal arts students.

Cole (23) found that very little or no contact and interaction was maintained in colleges by subject-matter instructors with those directing student teachers. According to Adams (1), approximately two-thirds of the student teachers in one institution showed a definite need for more guidance in applying principles to learning situations. The greatest difficulties of student teachers, reported by Mooney (55), are in the areas of lesson planning, leading class discussion, pupil relationships, and adapting teaching to pupil needs, interests, and abilities. Seventy-five per cent of student teaching students attending 26 universities received their practical teaching experience in public schools according to Brink (16). Hildreth (36) stated the well-organized workshop in student teaching is an effective method of preservice education. According to Woellner (78), of a total of 252 different traits appearing on the rating schedules for evaluating student teachers in over 100 institutions, only ten traits appeared on more than 50 instruments while an aggregate of 146 different traits occurred on only nine or fewer of these schedules. Either no direction whatever or only technical instruction for using the scales was given.

Lange's (44) study at the University of Wisconsin found that important terms in education did not have the same meanings for the students and the instructors in the course.

An intensive three-year study on professional laboratory experiences (conducted jointly by the American Association of Colleges for Teacher Education (3) and the National Association for Student Teaching and by several individual investigators) and studies by Brink (16) and Campbell (22) revealed that elementary education students receive two to three times as much laboratory experience as do the secondary education students.

From a study of the personal traits of 102 prospective teachers Schmid (64) found that there exists certain relationships between the individual aspects of personality and practice teaching ratings or grades received. This study further indicated that such instruments as the Mooney Problem Check List or the Washburne Social Adjustment Inventory do not measure the same personality dimensions in male and female students. Blum (13) found that the differences in personality traits between education students and those of other professions were statistically insignificant, thus refuting any implications that education students are inferior in personality to other groups. No statistically significant difference was found between students who remained in preparation for teaching and those who left during the period 1941-43. The groups were not significantly different with respect to intelligence, achievement, and personality. Sea-

goe (65) suggested that assignment of cause for leaving teaching can be ascribed to environmental stress, of which the curricular offerings of the teacher-education institution plays a part, rather than the psychological pattern of the individual.

Dallman (24) concluded that teachers, supervisors, and college teachers agreed inadequate training was offered to future teachers in the areas of reading, remedial reading, and special reading. An educational guidance course, studied by DiMichael (25) through the use of a questionnaire consisting of 50 behavior problems, showed that no change occurred in the attitudes of experienced teachers. Brinkley and Jordan (17) and McGrath (52, 53) reported a large variety of course emphases, greatly differing objectives, and little standardized content in the philosophy of education. Doane (26) stated that student teaching was found, in almost all teacher-education institutions, to be a part of their professional curricula and that 90 per cent of the schools require the prospective teacher to take child psychology and educational psychology.

In the area of specialization Hurl (39) concluded that of 500 curriculum investigations in higher education, science teaching was commonly implied. The reason for this was to prepare future teachers for changes brought about by scientific progress. Smith (68) found that there is an important task to be done in studying the teacher's job and re-orienting the whole course of preservice education, especially in major and minor subjects. This recommendation was made from a comparison of 11 institutions which prepare 65 per cent of the English teachers in a particular state. The topics which received the lowest ratings were history, theoretical educational lectures, experiments, and psychology. Core curriculum receives very little attention in the preparation of teachers according to Alberty (2) who stated that only three of 34 teacher-education institutions send teachers into the field prepared to teach in this special way. Boutelle and Mead (15) found that little time is devoted in 81 colleges to developing skill in use of the library by teacher aspirants. Bender (8) discovered that there is a need for more participation experiences and responsibility situations for the student teacher in agriculture. Rhoad (60) found that 54 per cent of the beginning teachers in this field possessed pertinent abilities in the area of swine production.

The need for a broad rather than a narrowly specialized major for social studies teachers was pointed out by Landsittel (43). Investigations by Lillywhite (46) in speech, Hilton (37) and Robinson (61) in rural school management, Herrington (34, 35) in educational sociology, and Beu (9) and Russell (62) in physical education showed that little change has taken place in terms of expressed needs or current status of these subjects. Inadequate facilities and equipment and difficulties in management and organization made up 49 per cent of the 882 learning problems of 30 students in physical education as reported by Brown (18). Stiles' (72) study of university practices in the preparation of high school teachers showed that they typically acquired a generally related, but not fused, 12 to 28 semester hours in education and a subject-matter major and minor. Curriculum planning groups were usually found to be interdepartmental rather than university-wide.

Follow-Up Studies

Several investigations of professional education of the follow-up sort were reported. Nemec (56) maintained that certification and teacher education cannot be separated for study because the type of preservice education is intrinsic in the recommendation of the graduate for his first license. Her study of all the available records of 265 teachers, who had had difficulty with obtaining or maintaining state certification in Wisconsin, revealed that practices in the process of selection, education, and recommendation for certification by the parent-preparing institution were responsible for many so-called failures of individual teachers. Hult (38) evaluated the work in a professional teacher-education course, The Nature and Direction of Learning, at the University of Wisconsin, and found uniformly low correlations with in-service teacher efficiency.

In a follow-up study made of 96 teachers by Tudhope (74), he endeavored to determine the validity of the final student teaching mark when compared with later teaching ability. Each teacher was visited by a qualified rator and his teaching ability assessed according to the same literal scale that was used in the assessment of his final grade while at the teacher-education institution. The correlation between the final teaching mark and the teaching mark assigned by the rator was .81 (P.E.=.024) with 62 per cent of the teachers having teaching marks which were the same. Twenty-three per cent of the group received later marks which were lower while 15 per cent of the later ratings showed improvement.

A study of the ratings given by superintendents to selected Iowa State Teachers College graduates was made by Hampton (33). In general, the teachers studied were con-

sidered acceptable by their superintendents, and the teachers who dropped out of teaching before the second rating received lower initial mean ratings on every trait than the teachers who remained longer in teaching.

A follow-up investigation by Lins (48) of graduates of the University of Wisconsin reported correlations between grades in Child Development, The School and Community, The Nature and Direction of Learning, and Practice Teaching which form a part of the undergraduate sequence, and a composite of efficiency measures of .28, .14, .19, and .15, respectively. The correlation between average grade in the major and efficiency ratings was .23.

Bach's (7) study yielded coefficients of correlation between the final ratings for practice teaching and ratings for the first semester of in-service teaching, on the same traits, of .27 to .06. The presence of substantial correlations, both among preservice and among in-service ratings, led him to question whether practice teaching and actual teaching are comparable activities.

Among the follow-up type of areas of specialization, rank in high school class, subject-matter scores, mental scores, and English scores constitute the very minimum to be used as measures of teaching ability and, as possible standards for guidance of teaching aspirants in preservice programs, according to Armentrout (5). He urged the use of more factors than the above named. Fuller (30), Gothams (31), Hult (38), Jayne (40), La-Duke (41), Lins (48), and Seagoe (65, 66, 67) suggested the use of multiple criteria in evaluating preservice teacher education.

Martindale (51) found teachers of mathematics and science majors were the most satisfied with their positions, while home economics majors and science majors were the least satisfied.

Summary and Conclusions

It has been the purpose of this survey to examine the type of problems studied and the evaluative techniques employed in research relating to the preservice education of teachers during the past 11-year period.

Most of the studies have related to either the professional education of teachers or areas of specialization. Fewer studies have been made of the general education of teachers.

A great variety of data-gathering devices, both subjective and objective, and of sources of data have been employed. In an attempt to evaluate the preservice education of teachers in terms of in-service teacher efficiency, the studies reported here have been grouped under three heads: (1) summaries of opinion; (2) surveys of practice; and (3) follow-up studies.

Often the studies are of the survey type which supply information at a certain level but leave much to be done in the way of systematic evaluation.

The findings in the various areas are sometimes in conflict with one another. This doubtless arises from the lack of validity and reliability of testing instruments, inconsistency of items and/or things measured, differences in situations, and dissimilar interests of investigators. It should be pointed out, too, that most studies have been of the isolated study type done by persons seeking doctor's and master's degrees. While a beginning has been made, further research is needed, especially more systematic and continuous research.

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AN ANNOTATED BIBLIOGRAPHY ON TEACHER RECRUITMENT, SUPPLY, AND DEMAND

R. H. Eliassen

Out of long familiarity with this field, Mr. Eliassen, Chairman of the Graduate Division, East Tennessee State College, was requested to prepare this important bibliography. He selected and annotated the references with a view to their value for persons interested in problems of staffing the school systems of our nation. Recent works predominate, but a few earlier studies are included because of their unusual techniques or significance.

Mr. Eliassen writes that these references are typical of hundreds which are available and which are deserving of attention and study. Those listed here, however, provide a substantial nucleus both for gaining a current view of the problem and for beginning a more extended study.—Douglas E. Scates, Editor.

ARCHER, CLIFFORD P. "Recruitment, Institutional Selection, and Guidance of Teachers." ***Review of Educational Research*** 19: 191-200; June 1949. Presents a summary of 43 investigations in recruitment and guidance of teachers during the period 1946-1949.

BARR, ARVIL S. "The Measurement and Prediction of Teaching Efficiency: A Summary of Investigations." ***Journal of Experimental Education*** 16: 203-83; June 1948. Summarizes 153 references related to the problem of measuring and predicting teacher efficiency. These are annotated and grouped into six categories.

BARR, ARVIL S. "Wisconsin Studies of Teaching Ability." ***Journal of Educational Research*** 41: 710-17; May 1948. During the last decade or more Mr. Barr has directed a number of studies at the University of Wisconsin that provide a cooperative approach to the problem of predicting teaching success through analyses of various teacher personal and professional qualities. Presents 24 progress reports of current studies some of which have now been completed. A previous review of such studies was made in the ***Journal of Educational Research*** for May 1940.

BOWERS, H. J. ***The Elementary Teaching Situation 1951-52.*** Columbus, Ohio: State Department of Education, 1951. 12 p. One of the most systematic students of teacher supply and demand is Bowers of Ohio. In this report he shows the critical situation in elementary education and makes the alarming statement that in 1951 the number of elementary teachers who dropped out of teaching exceeded by 890 the number graduated by all the teacher training institutions of Ohio.

BRICKMAN, WILLIAM W. "The Education of Teachers." (Educational Literature Review) ***School and Society*** 72: 214-21; September 30, 1950. Presents a summary and evaluation of 35 selected references dealing with the education of teachers. A previous summary on this same topic was made by the author in ***School and Society*** for July 26, 1947.

BYERS, LORETTA M. "High School Recruitment of Elementary Teachers." ***Clearing House*** 25: 8-14; September 1950. A survey of 313 high schools in 38 states reveals that no systematic procedures are followed in the recruitment of elementary school teachers. Many schools do nothing because they do not believe

that it is one of their problems. Some schools on the other hand do significant work in teacher recruitment.

COBB, PAUL R. "High School Seniors' Attitudes Toward Teachers and the Teaching Profession." ***The Bulletin*** 36: 140-44; January 1952. Washington, D. C.: National Education Association, National Association of Secondary School Principals. A summary of a master's thesis from Fort Hays State College reporting what 1000 high school seniors thought about teachers and the teaching profession. The attitudes are favorable but not favorable enough for many of the students to consider teaching as a career. Only 88 of the 1000 indicated a decision to enter teaching.

DOMAS, SIMEON J. and **TIEDEMAN, DAVID V.** "Teacher Competence: An Annotated Bibliography." ***Journal of Experimental Education*** 19: 101-218; December 1950. The entire issue of the December 1950 *Journal of Experimental Education* is devoted to an annotated bibliography on teacher competence. A total of 1006 references is included. Anyone interested in teacher competence may also wish to refer to an excellent discussion of this topic by A. S. Barr in the *Encyclopedia of Educational Research,* Revised Edition, p. 1496-1554.

ELIASSEN, R. H. and **ANDERSON, EARL W.** "Investigations in Teacher Supply and Demand Reported in 1951." ***Educational Research Bulletin*** 31: 67-74, 84; March 12, 1952. Summarizes the studies that have been made in teacher supply and demand for the year 1951. This study is the twenty-second in a series of annual studies in teacher supply and demand made by these authors, all of which have appeared in the *Educational Research Bulletin.* They have also summarized all the reports on teacher supply and demand which have appeared in the *Review of Educational Research.*

ELIASSEN, R. H. and **MARTIN, ROBERT L.** "Teacher Recruitment and Selection During the Period 1944 through 1947." ***Journal of Educational Research*** 44: 641-63; May 1948. This is one of six summaries of studies in teacher recruitment made by these authors. A total of 193 references appearing from 1944 to 1947 are included in this summary. Fifteen recommendations and 20 conclusions are presented for the consideration of administrators of teacher-education programs.

FINE, BENJAMIN. ***Our Children Are Cheated.*** New York: Henry Holt Company, 1947. 237 p. Mr. Fine made a six-month tour of the United States to study firsthand the educational situation on a national basis. His findings were reported in 12 articles in the *New York Times* and these have been incorporated into the book listed above.

FLINTON, EDGAR W.; ARMSTRONG, CHARLES M.; and **SOPER, WAYNE W.** ***How Many Public School Teachers Does New York State Need?*** Albany, New York: The State Education Department, November 1951. 26 p. (Lithographed) This is one of a series of studies that have been made and will be made of the need for teachers in New York State. Forecasts for the future are made. Accurate estimates can be projected only six years into the future, since the current birth rates determine with considerable accuracy the number of pupils who will enter first grade at that time. Factors such as shifts in population and a gradual increase in the percentage of pupils who attend private schools complicate the problem in New York.

GRAY, WILLIAM S. "Selected References in Teacher Education." ***Elementary School Journal*** 53: 232-40; December 1952. This is one of the most helpful bibliographies for those who wish to keep up on current happenings in teacher education. These annual bibliographies appear in each December issue of the *Elementary School Journal.*

HILL, ALFRED T. "How England Met Her Post-War Teacher Shortage." ***Educational Forum*** 16: 17-20; November 1950. Summarizes a doctor's dissertation made on this subject. Presents significant data from the careful firsthand study of 25 of the 55 emergency teacher training institutions established in England following World War II.

KLAUSMEIER, HERBERT. "Can More Elementary-School Teachers Be Secured from the Current College Enrollment?" ***Journal of Teacher Education*** 2:9-14; March 1951. Presents seven conclusions based on a survey of the literature in the field of teacher recruitment.

KRINER, H. L. ***Pre-Training Factors Predictive of Teacher Success.*** State College, Pennsylvania: The Pennsylvania State College, 1931. 91 p. (Studies in Education Number 1.) This study is distinctive in that it starts with teachers who have demonstrated their abilities in teaching. The author then attempts to find out how these persons may have been discovered in the high school. A careful five-year study (1933-37) was initiated on the basis of this study.

LONG, CLARENCE M. "Selective Teacher Recruitment." ***Phi Delta Kappan*** 33: 142-44;

November 1951. Report of the Phi Delta Kappa Commission on Selective Teacher Recruitment which was appointed in 1946 in order to combat the serious teacher shortages at that time. This commission has enlisted the support of many agencies such as the FTA, PTA, National Institutional Teacher Placement Association, and state teachers associations. Many interesting materials have been collected and these may be contacted through a selected bibliography prepared by the commission.

MAASKE, ROBEN J. "Analysis of Trends in Teacher Supply and Demand, 1900-1950." ***Journal of Teacher Education*** 2: 263-68; December 1951. A review of supply and demand conditions in the teaching profession for the first half of the century, indicating causes and making recommendations for the improvement of present conditions.

MAUL, RAY C. ***Teacher Supply and Demand in the United States.*** Washington, D. C.: National Education Association, National Commission on Teacher Education and Professional Standards, 1952. 40 p. This is the fifth annual report of the above sponsoring organization. Mr. Maul has made a distinct contribution to teacher education with his annual studies of teacher supply and demand since 1945. The first three years his summaries were for the North Central Association area, but since 1948 they have been national in scope. (The *sixth* annual report will become available at the same time this bibliography appears in print. It will be found in this issue of the *Journal*, pages 3 to 45, inclusive.)

MICHAEL, R. E.; PIGGOTT, LEE D.; and MAUL, RAY C. "What Is the Principal's Role in the Recruitment and Training of Future Teachers?" ***The Bulletin*** 35: 63-81; March 1951. Washington, D. C.: National Education Association, National Association of Secondary School Principals. The three authors present separate, successive articles indicating the need for a program of teacher recruitment for teaching, and elementary teaching especially, in the secondary schools of the United States.

MORRISON, ROBERT H. and WINANS, S. DAVID. ***The Demand and Supply of Teachers, 1951-52.*** Trenton, New Jersey: State Department of Education, Division of Higher Education. Research Report No. 103, May 1952. 30 p. (Mimeographed) This is the most recent of a series of studies on teacher supply in New Jersey. The shortage of qualified teachers, especially in the elementary grades, has become more serious than in recent years, and more and more complex administrative problems are occurring as the enrollments increase. Some of the emergency measures that have been resorted to are: having classes meet in shifts, providing makeshift quarters, and necessitating giving teachers excessive loads.

NATIONAL EDUCATION ASSOCIATION, NATIONAL COMMISSION ON TEACHER EDUCATION AND PROFESSIONAL STANDARDS. "Probable Demand for Teachers in the United States for the Decade 1949-50 Through 1958-59." Washington, D. C.: The Association, 1948. 29 p. (Mimeographed) Reports that the number of new elementary teachers that will be needed during this decade will be 1,033,994. The peak year for elementary school enrollments will be 1957-58. These estimates will have to be revised in the light of the continued high birth rate.

NATIONAL EDUCATION ASSOCIATION, NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS. "School Practices in the Recruitment of Teachers." ***The Bulletin*** 32: 84-88; October 1948. Washington, D. C.: The Association. Reports the findings from a questionnaire to 3,300 high school seniors in Pennsylvania regarding efforts of the faculties and administrations in actively recruiting prospective teachers from this group. Of these seniors only 4.4 per cent indicated that they planned to teach. The evidence seemed to indicate that no systematic recruitment procedures were followed throughout the high schools of Pennsylvania.

NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "Schools and the 1950 Census." ***Research Bulletin*** 29: 135-70; December 1951. Washington, D. C.: The Association. Presents significant data on population growth, mobility, employment, and indicates how these conditions will have an impact on the school population and the future tasks of education.

NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. "Teacher Personnel Practices 1950-1951: Appointment and Termination of Service." ***Research Bulletin*** 30: 1-30; February 1952. "Teacher Personnel Practices 1950-1951: Employment Conditions in Service." *Research Bulletin* 30: 35-63; April 1952. These two bulletins present data concerning standards for teacher preparation, bases for appointment, recruitment, termination of service, salaries, and teacher welfare.

NIEDERHAUSER, JOHN O., PARTINGTON, ELIZABETH, and **VESEY, MARGARET A.** "Teaching Opportunities in 1951." ***Educational Research Bulletin*** 31: 29-41; February 13, 1952. Annual summary of Appointments Division of The Ohio State University. These reports have been made annually for the past 20 years or more under the following Chairmen of the Division: John O. Niederhauser, L. N. Nicholas, Allen D. Patterson, and Earl W. Anderson who initiated these reports.

RICHEY, ROBERT W. and **FOX, WILLIAM H.** ***An Analysis of Various Factors Associated with the Selection of Teaching as a Vocation.*** Bloomington, Indiana: The Indiana University. Bulletin of the School of Education, 1948. 58 p. Summarizes 1615 questionnaire replies from The Indiana University students, mostly Freshmen, indicating factors that influence them for or against teaching as a profession. Much misinformation about teaching as a profession was prevalent in the replies.

RICHEY, ROBERT W. and **FOX, WILLIAM H.** ***A Study of Some Opinions of High School Students with Regard to Teachers and Teaching.*** Bloomington, Indiana: Division of Research and Field Services, The Indiana University, 1951. 64 p. Investigates a random sampling of 3,917 students from 100 Indiana high schools. Showed that, for the most part, students were poorly informed about teaching. Thirteen per cent had given some thought to teaching as a career, but only 2 per cent had definitely decided to teach. Girls found teaching more attractive than boys, although 40 per cent of the girls thought teaching a deterrent to marriage.

ROMODA, JOSEPH J. ***Eight Years of Teacher Selection: A Descriptive and Quantitative Review of Selective Admission.*** Syracuse, New York: School of Education, Syracuse University. Monograph No. 1. January 1948. 41 p. One of the most significant studies of selective admission for teacher education has been conducted at Syracuse University. This report, as well as others by Maurice E. Troyer and Verna White, indicates that much can be accomplished through concerted and organized action in the selection and elimination of prospective teachers.

RUEBEL, R. F. ***Teacher Supply and Demand in Wyoming, 1951-1952.*** Laramie, Wyoming: Bureau of Educational Research and Service, College of Education, University of Wyoming, 1952. 38 p. This is the fourth study of teacher supply and demand made in Wyoming since 1948. Of Wyoming's 2957 teaching positions, 799 were filled by new teachers in 1951. Of these about half were trained in other states. In view of the serious shortage of elementary teachers in most states, Wyoming needs to consider meeting the demand for teachers from its own institutions of higher education.

THE PRESIDENT'S COMMISSION ON HIGHER EDUCATION. ***Staffing Higher Education.*** Volume IV. Washington, D. C.: American Council on Education, 1948. Estimated that within five years following 1947 the need for college instructors would be doubled. This has not happened, but in 1949 the American Council on Education issued a special bulletin entitled: *Wanted 30,000 Instructors for Community Colleges.* This need is projected in terms of the desirable expansion of the so-called community colleges recommended by the President's Commission, in order to provide higher education to many students who could not otherwise attend college.

UNITED STATES DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS. ***Employment Outlook for Elementary and Secondary School Teachers.*** Washington, D. C.: Government Printing Office, Bulletin No. 972, 1950. 89 p. *Effect of Defense Program on Employment Situation in Elementary and Secondary School Teaching.* 1951. 14 p. These bulletins present a picture of the current status of teacher supply and demand in the United States as a whole and also by individual states. The shortage of elementary teachers and the surplus of secondary school teachers seem quite general throughout the country. However, there are some exceptions.

HIGH SCHOOL COURSES FOR FUTURE TEACHERS

Katherine Stapp

MARK TWAIN's famous remark about the weather is applicable to selective recruitment of teachers. There's much talk, much writing about the need for teachers, but all too little of positive action to solve the problem.

An approach used in many schools is the formation of Future Teachers of America clubs, and the organization of such a club in the Danville High School was considered. But our students are already "clubbed" to death. A new club could not hope to enlist the musicians, the dramatists, the athletes. Many in each of these groups were interested in teaching and were potentially excellent prospects. Therefore, in the fall of 1950, it was decided to institute a regular high school course, entitled "Introduction to Teaching," offering credit toward graduation, and designed for interested senior students.

There is a philosophy, perhaps not too clearly defined, back of this innovation. For many years high schools have been providing pre-vocational courses for future office workers, businessmen, and tradesmen. Recently, Distributive Education and Distributive Occupations courses have made available extensive training and earn-while-learning programs for other vocational fields. But there has been no provision for prospective teachers.

The usual excitement of commencement activities in spring seemed to indicate that the fall semester was a more practical time to offer the new course. Students permitted to enroll in the course are required to have at least a C to B academic record and a clean slate in the dean's office.

The course is divided into three periods. The first period the group meets as a regular class to study the profession of teaching—the advantages of teaching, both tangible and intangible. The students learn that, while there are no great monetary prizes in teaching, it usually provides a comfortable living and the security that tenure, sick leave and retirement benefits may offer. Discussion emphasizes the satisfactions that every teacher knows but finds hard to express—the friendships with fellow teachers and students, the feeling that one is of service to mankind, and the pride one feels in the success and achievements of those who were once his pupils.

Students measure themselves by the standard of qualifications of a good teacher. They learn the importance of physical and mental health, of a pleasing personality, and of scholastic ability. They learn of the great need for teachers, and of the opportunities in elementary and secondary education, in supervision and administration, in special education, and in related fields. College catalogues are examined to find out where they can secure the education they desire, how much it will cost, how expenses can be lightened by scholarships or part-time work, what courses will be required, and what courses may be elected. Then they look briefly at teacher placement services, certificates, and contracts.

At the end of the first period students take a brief look at the local school system and prepare for the second period's work which includes observation in the elementary grades of the city. Two days a week the students and the teacher go visiting, until they have watched classes in action in the first eight grades and in special education.

Success in college work depends to a great extent upon the ability of the student to review material presented in lectures and the ability to write and to speak well, and practice in these skills is included in the courses. During the first period students read from books on education and magazines, listen to visiting speakers, watch movies, and discuss the subject of the week. At the end of the discussion, each student writes a short paper on the subject. In the second period, reading, visual aids, and discussion center around the subject of understanding the child. Students seek in understanding others to understand themselves as well.

The third period is the time devoted to helping-teacher assignments, and each student files a request sheet (at the end of the

Danville (Illinois) High School Offers Credit Course for Future Teachers

second period) telling where he wants to work in the school system. He may ask for assignment to any grade, any school, any subject. With the help of the Director of Elementary Education, schedules are worked out which adhere as closely as possible to students' requests.

The helping-teacher assignments require students to be absent from high school only one period each day. Often, students will arrange voluntarily for longer periods of work, giving up a study period or time before or after school. The work that they do depends upon the teacher to whom they are assigned. This work is not considered as student teaching, and the students are never given complete charge of a class or room except in case of an emergency. Diaries are kept, and conferences are held each Friday with the teacher of the course for valuation of the week's work. At the end of the six-weeks period of helping-teacher work, the elementary teacher submits a simple report, together with appropriate comments.

The three-year period in which the course has been in operation is too short to evaluate accurately its effectiveness as a selective recruiting device. However, it is evident that the course has served in interesting young leaders in education and in the teaching profession. This year (1952) nine girls and seven boys are enrolled in the course. Included in the group are the top student accompanist, the editor of the school paper, the president of the dramatic club, and the co-captains of the football team. In fact, every one of the seven boys has earned at least one school letter. Will they all become teachers? Probably not. Former classes have lost heavily to Uncle Sam and to Cupid. What is the measure of success of such a venture?

This year a total of 16 graduating seniors will have had the course. Perhaps only a fraction of this number will become life members of the teaching profession. But one girl said, "I will never object to paying school taxes." A boy said, "I know a lot of fathers and mothers who could benefit from what I have learned about children." These future adult citizens know something about the problems and the needs of the schools; they will view teaching as an honorable and respected profession. The course is beginning to educate for education.

"Introduction to Teaching" is not all that it should be, partly because the organized profession has done so little to provide assistance for such programs. When a school adopts a D.E. or D.O. program, carefully prepared courses are available. National and state organizations and support are back of the planning. Many schools might be interested in inaugurating such a course for prospective teachers, but when they find that there are no textbooks, that the individual teacher must work out the plans for the course, the tendency is to drop the idea. Is it too much to hope that educators will eventually take the same interest in the future of their profession as merchants and industrialists have in theirs? Is it too much to hope that some day they will develop organized plans for teaching about teaching?

Browsing Through the Bookshelves With

Dorothy McCuskey

IT HAS long been a theory of mine that one of our major needs in education is for books suitable for the classroom teacher. There is a tremendous potential market for such material, but there are no organized ways to tap it, and publishers have understandably aimed their materials at the organized (one might say, "captive") groups in college courses. It is therefore not surprising to note that most of the books which stem from the actual work of teachers, and therefore are of most potential value to teachers, come from a noncommercial publisher—Bureau of Publications, Teachers College, Columbia University. Perhaps it is not fair to mention a publisher without at the same time pointing out that the books result from the type of work being done by the Horace Mann-Lincoln Institute of School Experimentation.

These remarks are a prelude to discussion of ***Cooperative Procedures in Learning,*** by Alice Miel and Associates (New York: Bureau of Publications, Teachers College, Columbia University, 1952. 512 p. $3.75). When the research supporting this book was planned, three underlying assumptions were made: (1) That the school is responsible for developing an understanding of the nature of cooperative procedures and for teaching the skills involved; (2) that learners should participate in determining the purposes to which they will work; and (3) that knowledge is of little value unless it is related to action. Over a five-year period, teachers in several parts of the country, under the guidance of Institute consultants, experimented with varying cooperative procedures, analyzed and evaluated their results. The book is made up largely of records and accounts of this work. Part I deals with opportunities for cooperative planning in specific situations, such as "Planning Use of Time," "Planning Service Projects," and "Evaluating Group Processes and Achievements." Part II deals with trouble points teachers meet in learning to use cooperative procedures.

This book will be valuable in graduate classes, but its main use ought to be in the field. Perhaps a companion volume should deal with implications of studies such as these for the supervisory process.

Teacher Education

Evaluating Progress and Charting the Future of Teacher Education, Report of the Kalamazoo Conference (Washington, D. C.: National Commission on Teacher Education and Professional Standards, National Education Association, 1952. 108 p. $1.00) is a challenging volume. Conference participants were not complacent about any phase of teacher education. There are more questions than answers in this volume, but they are questions which should be considered by every teacher-educating and in-service group. Discussions were organized in five phases: (1) This We Believe; (2) This We Know; (3) This We Challenge; (4) This We Ponder; and (5) This We Seek.

Throughout the volume, groups challenge the concept that education should be only for the intellectually able, or that it consists only of the transmission of the cultural heritage. They therefore challenge programs of teacher preparation which emphasize only academic competence. It is rather anomalous that these challenges by hundreds of teachers have received less publicity than the countercharge by a single representative at a recent meeting of the American Historical Association.

Recurring themes in the "This We Seek" sections are: better selections of prospective teachers, teachers better able to participate in and interpret all phases of community life, and better accrediting procedures for teacher-education institutions.

Intelligent use of type variations and of spacing helps to make the ideas jump out at the reader.

General Education

General Education. Fifty-first Yearbook, Part I, of the National Society for the Study of Education (Chicago: University of Chicago Press, 1952. Paper, $2.75; Cloth, $3.50).

In the judgment of this reviewer this volume is the most significant one to appear in the general education movement. This yearbook gets at the heart of things. It traces the evolution of the general education movement and considers the philosophical, psychological, and social foundations which undergird the movement.

Seldom does a single chapter dominate a volume as does Chapter II, "The Philosophical Foundations of General Education," written by Harold Taylor. Three philosophies are outlined around which programs of general education may be built: *rationalism*, in which the cultivation of the intellect becomes the sole aim of education; *eclecticism* or *neo-humanism*, in which the dualism of mind and body is accepted and the humanistic traditions of Western civilization are emphasized; and *naturalism* or *instrumentalism* in which emphasis is placed upon the individual student, his needs, and his goals.

Mr. Taylor's chapter sets the stage for the rest of the volume. The succeeding chapters deal with the psychological and social foundations of general education; generalized courses in the humanities, the social sciences, and the natural sciences; students and personnel services; problems of instruction; the extra-curriculum; problems of evaluation, organization, and administration; the preparation of teachers of general education; and faculty participation in developing general education programs.

In the concluding chapter Horace T. Morse summarizes and evaluates current practices in general education. In the multiplicity of philosophies and programs Morse finds that "The dominant unity is . . . *purpose*—a dedication to educate young men and women to understand, uphold, and improve the freedom which is their heritage and which, however diverse and varied the educational patterns of attaining such freedom may be, yet properly imbues them with the zeal to become informed, intelligently critical, and active citizens in a free society."

This yearbook was produced by a committee headed by Chancellor T. R. McConnell of the University of Buffalo. Other contributors, in addition to Taylor and Morse, include Stephen M. Corey, Robert J. Havighurst, Clarence H. Faust, Arthur Naftalin, Louis M. Heil, Malcolm S. MacLean, Esther Raushenbush, Harold B. Dunkel, Esther Lloyd-Jones, E. G. Williamson, Ruth E. Eckert, A. J. Brumbaugh, C. Robert Pace, Karl W. Bigelow, and Jacob Van Ek. Dr. McConnell and his committee have done an excellent job in producing this outstanding volume.—*W. Hugh Stickler, Reviewer.*

The Middle Grades

Alvina Treut Burrows, ***Teaching Children in the Middle Grades*** (Boston: D. C. Heath and Company, 1952. 280 p. $3.75), is concerned with the methods and techniques of teaching the fundamental skills from the point of view of the child rather than from the school. The approach of this excellent new book is strictly from the viewpoint of the development of the child himself. The author has collected and interpreted a large amount of research data relating to the art and science of teaching children who are making the change from fundamental skill courses to content courses. While this book would be valuable for preservice training purposes, the nature of its content and the method of exposition are so technical that the in-service group of teachers would benefit more highly from its use.

This book should be in the hands of all elementary teachers, for it gives a clear picture of the emotional, social, and intellectual growth and development of the child with many illustrations taken from true-to-life classroom situations. Briefly, this volume tells "how" and "why" in such a meaningful fashion that all professional people would benefit from its ownership.—*Sam J. Underwood, Reviewer.*

Rural Education

Education in Rural Communities. Fifty-first Yearbook, Part II, of the National Society for the Study of Education (Chicago: University of Chicago Press, 1952. Paper, $2.75; Cloth, $3.50).

This book is a general treatise on the services and major characteristics of rural schools in the United States. "The interest of the reader is directed to the consideration of the significance of appropriate plans of organization, pilot programs, cooperative projects, modern facilities, and trained leadership in the rural schools for the improvement of the social and economic outlook of the people who live in rural communities."

As in most yearbooks, considerable material is included for use by members of the Society. However, this material is well arranged and does not detract from the body of information reported by Lowry Nelson, Ruth Strang, Francis Chase, John E. Baker, N. E. Kullman, Jr., Julian E. Butterworth, Kate V. Wofford, John S. Carroll, and Shirley Cooper. Zoraida E. Weeks has prepared a supplementary chapter,

arranged by interest subjects, on publications, films, and agencies and organizations concerned with rural education.

Each chapter is summarized by the author, and the Yearbook Committee has prepared a thorough introduction which provides the basic information necessary for the reader to have a foundation knowledge of rural education programs and problems. After each of the writers presents his study, the committee makes suggestions for immediate action on the part of the teacher, the supervisor, the principal, the superintendent, and parents.

The chapter on pilot programs presents many illustrations where problems of rural education are being met successfully. If the gains of these isolated communities can be transferred to thousands of others, no rural community need be deprived of effective education.—*Ivan B. Stafford, Reviewer.*

Arithmetic

Lowry W. Harding. ***Functional Arithmetic: Photographic Interpretations*** (Dubuque, Iowa: William C. Brown Company, 1952. 196 p. $2.00).

Do you want a picture book on the teaching of arithmetic? If so, look closely at Professor Harding's paper-covered volume on functional arithmetic. The author has collected over 100 photographs of various arithmetic activities within the elementary school classroom and has arranged them on grade levels. At each level, kindergarten through grade eight, the book provides a two-page summary of basic concepts to be developed and then follows with ten (and exactly ten) photographs. Although this choice of the number ten is quite in keeping with making our decimal number system meaningful, some of the pictures show poor background detail. The author has compensated for this inadequacy by providing short verbal explanations of each picture.

The first section of the book provides the reader with a fine outline of the various theories of arithmetic so that the background for the meaning, "theory of arithmetic," can be better understood. The last section details with functional mathematics for citizenship and will be of assistance to teachers of classes in general mathematics on grade-nine level.

This publication is a fresh breeze on the sea of pedagogical books in arithmetic which tend to repeat each other.—*Garland B. Russell, Reviewer.*

Peter L. Spencer and Marguerite Brydegaard. ***Building Mathematical Concepts in the Elementary School*** (New York: Henry Holt and Company, 1952. 372 p. $3.75).

"Not a manual of methods," claims the authors, "but rather a book designed to present mathematics as part of human behavior. . . . The child should not be asked to conform unless he understands the reasons for such conformation."

This affirmation is indeed most acceptable to modern educators, and the authors have shown many interesting ways of teaching arithmetic from an appreciational point of view. At the conclusion of each of the nine major chapters there are sample lesson plans. Many of them are excellent but some should be taken "with a grain of salt."

Teachers who are anxious to understand the basis of our decimal system and to develop a more challenging arithmetic program on an upper-grade level will find this book most helpful and profitable.—*Garland B. Russell, Reviewer.*

J. Allen Hickerson. ***Guiding Children's Arithmetic Experiences*** (New York: Prentice-Hall, Inc., 1952. 322 p. $5.00).

Allen Hickerson offers the reader a compact book in which two different approaches are made to the arithmetic teaching problem. Part I sets forth the way that arithmetic can contribute to the growth and development of children; Parts II and III develop in a brief and non-illustrative way the steps which the teacher should take in teaching the four fundamental operations (addition, subtraction, multiplication, and division) of whole numbers, common and decimal fractions. A short chapter on percentage completes the book. Appendix A makes an interesting listing of the in- and out-of-school uses which children have of arithmetic. This listing becomes more and more an "in school" listing as grade levels become higher. Although the author recognizes quite clearly the non-use which students make of the traditional middle and upper grade arithmetic, he makes little attempt to suggest to the teacher how such a program can be replaced by a vital and active arithmetic curriculum.—*Garland B. Russell, Reviewer.*

Educational Sociology

Clyde B. Moore and William E. Cole. ***Sociology in Educational Practice*** (Boston: Houghton Mifflin Company, 1952. 440 p. $4.00).

The authors' stated purpose in this book is "to describe and analyze educational policies and procedures and to improve educational practice by bringing together for the teacher (in preparation or in practice), the supervisor, the administrator, and the lay reader, significant sociological data and principles which are applicable to educational practice and which are indicative of what educational policies and

practices might be." This they have done to a remarkable degree for such a comprehensive purpose and treatment.

Approaching this essential area from the point of view of educational practice and then bringing to bear the sociological data with implications for practice has seldom been achieved in earlier works. It would seem that teachers and administrators also might respond well to the plan of focusing on the problems and practices with which they are already familiar.

The pattern of organization of the book begins with overview chapters on learning and education in a social setting, and the forces conditioning learning and education. These are excellent summaries of learning theory with emphasis on social and cultural aspects. Their teacher orientation is evident from the emphasis on problems and needs in education.

The pattern then takes a modified "institutional" trend, with chapters on the family as a learning and educational medium, and the influence of childhood and youth groups, the church, the economic system, as well as the implications for school and community relationships. This leads to a treatment of education and the democratic ideology. Here the recommendations for more real democracy in schools are persistent and are built upon comprehensive analysis of previous chapters. This need for democracy in practice continues as a unifying thread through the chapters on implications of population trends for education, minority groups, and class structure. Education in an international setting and as a federal enterprise comprises a chapter each in the same vein.

Attempting to pull together the implications and possibilities for practice provides the keynote for chapters on the sociology of curriculum construction and the sociological implications of method. The underlying philosophy of the book is summarized in the concluding chapters built around the role of education in social change and education and social progress. This is a somewhat liberal, if not progressive, philosophy, seemingly soundly based on premises accepted by the majority of contemporary social scientists.

The fact that each chapter is designed to have some degree of unity necessitates some repetition. The comprehensiveness of coverage necessitates brevity, in some instances approaching over-simplification. This is largely offset, however, by the usually excellent and up-to-date list of selected references at the end of each chapter. The textbook nature of the book is further enhanced by the addition of lists of problems and topics for discussion.

The supervisor, curriculum worker, or administrator who is looking for an inspirational or orientation reference which might influence change in the practices of teachers should find this a valuable book. It is not a how-to-do-it book, but it gives excellent argument for change in curriculum and methodology toward a more functional program. The occasional use of examples from educational situations gives practical suggestions to practitioners, but this occurs too seldom to be generally effective as a source of this kind. Again, however, footnotes and reference lists provide a source of information about the more detailed material. This is especially noteworthy in the areas of newer techniques and emphases such as group dynamics, discussion techniques, problem orientation, and the democratic classroom. Social studies teachers especially should find this an invaluable source of overview and bibliography.

In general, this is an excellent comprehensive treatment of a most crucial area. It is a valuable addition to the educational literature at a point which has been somewhat neglected heretofore.—*Woodrow W. Breland, Reviewer.*

Individual Guidance

Studying Students (Chicago: Science Research Associates, 1952. 411 p. $4.25) has been designed by its authors, Clifford P. Froelich and John G. Darley, as a basic text or handbook of guidance methods for individual diagnosis. It is the third book in the professional guidance series under the editorship of Mr. Froelich, who claims that this book complements but in no way overlaps other volumes in the series.

The authors by experience and position are eminently qualified in this important and growing area of guidance and counseling. Although experienced teachers and counselors will be disappointed by the introductory nature of this book, they are sure to find something of interest. They will be encouraged by the authors' awareness of and realistic approach to the practical school situation as it typically exists rather than as we would like it to be.

Seven areas in which teachers and counselors must collect information if they are to understand and help the student are identified in the opening chapter: scholastic ability, past achievement, aptitudes and disabilities, interest, personality adjustments, health, and family background. Of those, a separate chapter is devoted to each area except for the last two which are treated weakly in three or four pages each under the chapter topic, "Identifying Student Problems."

In addition, there are two chapters each on statistical methods, observations, and self-report documents; and single chapters on inter-

viewing, principles of guidance testing, the scatter-diagram, sociometric appraisal, and "guideposts" for industrial analysis. A particularly helpful feature of the book is its inclusion of these nontest methods in individual guidance. The chapters on interviewing and sociometric techniques are among the best.

The inexperienced counselor will appreciate the selectivity of the writers in the area of testing. Only the better known tests which they have liked and found to be most helpful are discussed. The omission of certain tests which counselors have found to be of considerable value may be explained, as Froelich and Darley point out, by the buying habits of the test users who for many reasons tend to use the same tests even though others may be as good—or better. Brief descriptions are included for 27 standardized tests—eight in the area of intelligence, five in achievement, four each in vocational interests and personality, two each in mechanical comprehension and spatial relations, and one each in clerical aptitude and psychomotor skill. Unfortunately the student is given little help in interpreting or applying these results in a guidance situation for an individual.

Written in a simple, readable style, the book has a minimum of professional terms and can be readily understood by the undergraduate student or the inexperienced teacher or counselor. It will doubtless find wide use in the beginning portions of the counselor-trainer programs.—*J. T. Hunt, Reviewer.*

Curriculum Guide

Ruth Strademeyer and associates have developed a handy and attractive pamphlet, ***Guides to a Curriculum for Modern Living*** (New York: Bureau of Publications, Teachers College, Columbia University, 1952. 60 p. $1.25), which streamlines and makes practical some of the salient concepts in her earlier book, ***Developing a Curriculum for Modern Living*** (1947). For example, the idea of a "persistent life situation" such as "managing money" is illustrated at the five-, eight- or ten-, fifteen-year and adult levels.

The book is a needed next step in making the modern curriculum approach intelligible to teachers in terms of things they *do*. The vocabulary is not in the common vernacular, but each idea is practically illustrated more than once. Graphically, the pamphlet sets a new standard of functional illustrations which illumine meanings. Because of these graphic illustrations, it is hoped the pamphlet will be useful to lay groups. It will certainly have a wide acceptance both in colleges and in the field.

Brief Mention

One of the most heartening items to come across this desk in recent days is ***Avenues of World Understanding***, a report on a four-year program for improving international cooperation at the Teachers College of Connecticut (New Britain). A recent series of *New Yorker* profiles about a workers' movement contrasted the "action" techniques of this group with the "form-a-committee" methods so many of us use. Through their UNESCO Council, these students acted. They raised money for a German student to spend a year in their midst, they sent their own representatives to Canada and Europe, they sent CARE packages, made displays, and sponsored a community festival. Their impressive outside speakers must have added much to the general intellectual stimulation of the student faculty group. One of the most significant outcomes of these developments has been the increased school-community interaction.

Role Playing: The Problem Story by George and Fannie R. Shaftel (New York: National Conference of Christians and Jews, 1952. 78 p. 25¢) is an interesting, play-by-play, how-to-do-it approach to role playing in elementary schools. It should be helpful to teachers who have not tried the technique and an excellent bibliography will help those who want to explore the field more thoroughly.

The Science Research Associates pamphlets continue to come forth in amazing profusion and utility. They serve many purposes in a teacher-education program. For example, ***Parents and Teachers as Partners*** was perfect this morning to start a beginning junior on her term paper. ***A Guide for Child Study Groups*** will serve this student as well as the faculty consultant, parent and teacher for whom it was designed. ***Baby-Sitters Handbook*** by Judy Flander is a gem of child care, adolescent economics, and general common sense whose audience should be far wider than teenagers. One of the more tangible dividends of book reviewing is the steady stream of these pamphlets which pass through my hands to graduate and undergraduate students. The editors have an uncommon knack of getting out pamphlets on topics students and adults need to be working at.

THE CORNELL UNIVERSITY PROGRAM IN ELEMENTARY TEACHER EDUCATION

Claude L. Kulp

CORNELL UNIVERSITY has instituted an experimental program in elementary teacher education. This program, designed primarily as a research project, seeks answers to some of the major problems related to the education of teachers for the elementary schools. Other problems being explored at Cornell include the questions: What proportions of general and professional education are needed for elementary teachers? Where should professional preparation begin in students' programs? What should be the basic program of professional education for all teachers? How should competence in teaching be measured? How can professional education be evaluated? What personal relationships between teacher and pupil are effective? Are theoretical courses effective prior to student teaching? Cornell is also experimenting in the problem method of approach as identified by student teachers in elementary teaching.

The current research project in elementary teacher education is supported by the Ford Foundation. Participating students are all graduates of approved liberal arts colleges who have had no professional courses and no formal teaching experience. The enrollment consists of 12 girls and one boy, each with an $1,800 fellowship, and one young man participating on a non-fellowship basis. This group of students was given the National Teacher Examination and it was discovered that they had apparently absorbed more of the philosophy, principles, and methods of teaching than is normally assumed. The majority of the students scored above the national norm for teachers college graduates. The remainder, with one exception, scored only slightly below the norm. At the end of the current project, these students will again be tested and, as a follow-up, the Examination may be given to a large group of liberal arts graduates to determine the knowledge of educational problems possessed by such students.

The program is an innovation in teacher preparation. The students are interning with "successful" teachers in elementary schools. These supervising teachers are not all superior, not all unusually progressive (in the sense of the teacher serving as a guide), and none are extremists. Each is highly regarded by one or more professional supervisors, consultants, or administrators.

The students observe and teach in the different classes in the elementary schools and record the problems which arise. These problems then become the basis for seminar discussions participated in by members of the University staff, the supervising teachers, state department specialists, and the interns. These seminars constitute the heart of the program in that they reveal the nature, sequence, and complexity of the problems faced by students when confronted with the organization, planning, and management of an elementary classroom.

The program for student observation and teaching provides a series of one-day visits to kindergarten and grades one through six for orientation purposes. These visits are followed by seven visits of three-weeks duration in each of the seven areas of elementary school organization. This prepares the student for the later choice of the area in which he wishes to concentrate for the final nine or ten weeks of the academic year. The total hours of actual classroom experience for each student is roughly equivalent to one full semester of observation and teaching.

The composite judgment of the Cornell staff conducting the seminar and of the supervising elementary school teachers provides the information with which to predict the potential success of the student teachers. A thesis or master's problem dealing with some specific phase of elementary education is required of each student. Several have selected their problems and are engaged in research. Students who satisfactorily complete the program will earn the Master of Education degree and will be certified to teach in the elementary schools of New York State.

Categories included in day-to-day problems include: classroom organization and motivation; discipline; human growth and development; music, art, health, and other special fields; philosophy of education; human relationships; evaluation; basic skills; curriculum; individual differences; methods; and miscellaneous subjects.

A Review of

WHAT'S HAPPENING IN TEACHER EDUCATION

Around the Nation

AT THE NATIONAL LEVEL

Southern Council on Teacher Education. During the meeting of the Southern Association of Colleges and Secondary Schools at Memphis, December 1952, an organization of persons interested in teacher education was formed. The new organization resulted from informal meetings of deans of colleges of education and state universities which have been held in connection with the Southern Association meetings in recent years. Membership in the organization will be on an individual basis, open to all who are interested in promoting teacher education. Annual meetings will be held in connection with the Southern Association's annual meetings. The over-all purpose of the Southern Council on Teacher Education is to serve in the same capacity for the region as has been the case of state advisory councils on teacher education within respective states.

The statement of purposes adopted at the organization meeting is as follows: (1) To bring together, for the purpose of improving all aspects of teacher-education personnel, those interested in the preservice and in-service education of teachers; (2) to interpret and represent the best interests of teacher education before professional and lay groups throughout the South; (3) to promote understanding and cooperation among all groups interested in teaching; (4) to stimulate the work of teacher-education councils in each state; (5) to stimulate research in problems of teacher education; (6) to strengthen programs of teacher education; (7) to develop programs which will insure an adequate supply of qualified teachers; and (8) to improve the quality of personnel teaching at the college level.

J. R. McLure, Dean, College of Education, University of Alabama, was elected Chairman of the newly formed Council and J. B. White, Dean, College of Education, University of Florida, was elected Secretary.

Committee on College Teaching Established. The American Council on Education has recently established a Committee on College Teaching, consisting of the following persons: Joseph Axelrod, Professor of Humanities and College Evaluator, San Francisco State College; George P. Berry, Dean of the Medical School, Harvard University, Theodore C. Blegen, *Chairman*, Dean of the Graduate School, University of Minnesota; Harry J. Carman, Professor of History and Dean-Emeritus of Columbia College; Charles W. Cole, President, Amherst College; William H. Conley, Vice President, Seton Hall; William R. Dennes, Dean of the Graduate School, University of California; John R. Emens, President, Ball State Teachers College; L. E. Grinter, Dean, Graduate School and Director of Research, University of Florida; Laurence D. Haskew, Dean, College of Education, University of Texas; Lewis Webster Jones, President, Rutgers University; Roger P. McCutcheon, Dean of the Graduate School, Tulane University; Fred B. Millett, Professor of English Literature, Wesleyan University; S. M. Nabrit, Dean of the Graduate School, Atlanta University; Esther Raushenbush, Dean, Sarah Lawrence College; Hugh Taylor, Dean of the Graduate School, Princeton University; W. Earl Armstrong, Acting Assistant Commissioner for Higher Education, Office of Education, Federal Security Agency (designee from Office of Education).

The specific tasks upon which the Committee will concentrate are as follows: (1) Recruiting a supply of able people to enter the college teaching field; (2) preparing more doctoral graduates of universities to be able teachers; and (3) assisting teachers in service to extend and improve their effectiveness.

STATE BY STATE

ALABAMA

The Alabama Council on Teacher Education, composed of university, state college, and state teachers college deans, is submitting to the State Board of Education recommendations which will establish a new plan for certifying teachers for the State of Alabama and the Southern Region. This plan promotes the idea of reciprocal teacher certification among the southern states.—*Geddes Self.*

CALIFORNIA

Study Tour. San Francisco State College announces a study tour, under the direction of Floyd A. Cave, covering the principal countries of Western Europe. Special attention will be focused on European reactions to American foreign policy. Conferences and interviews will be held with prominent public officials in the field of foreign policy, party leaders, and outstanding spokesmen of various centers of public opinion. The tour is offered especially for those seeking professional advancement through travel and is planned to give participants a working knowledge of post-war Europe and its problems, particularly as they bear upon American foreign policy. Travel to Europe and return will be by air. The countries to be visited include England, Belgium, Holland, France, Switzerland, and Italy. Upper division college credit may be earned. Tuition fees will be charged of those registering for credit.—*Floyd A. Cave.*

CONNECTICUT

State Teachers Colleges Request Funds. A total of $8,433,523 will be requested of the 1953-55 General Assembly by the four state teachers colleges for new buildings and facilities to meet the increasing demand for new teachers. Surveys again indicate that Connecticut's need for teachers will far exceed the present capacity of teacher-education institutions in the State, and the State Department of Education has placed a high priority on new facilities for these colleges.

The State Council on Teacher Education, emerging as a potent factor in the movement for professionalization of teaching, is encompassing representatives of lay and professional organizations, institutions authorized to prepare teachers, and the State Department of Education. The first fall meeting centered attention on in-service education of teachers and the development of an action program. Future meetings will deal with student teaching, teacher recruitment and selection, state approval of teacher-education programs, and supply-demand. J. E. Smith, President of Willimantic State Teachers College, is chairman of the Council.

Teacher Supply-Demand. Recent tabulations reveal that 15 Connecticut institutions engaged in teacher education will graduate 423 students eligible for high school certificates in June 1953, in contrast with 436 graduated last June. The five colleges offering a major in elementary education will graduate 435 in June, as opposed to 379 in June 1952. The estimated total number of new teachers needed in Connecticut public elementary and secondary schools in September 1953 is 1206—395 for grades 7-12, and 811 for kindergarten through grade six.—*Henry C. Herge.*

FLORIDA

School Building Shortage. The citizens of Florida took overt action last November to correct the critical school building shortage by voting to adopt an amendment to the State Constitution which earmarks, for school building purposes, income from auto tag sales up to $400 per instruction unit. Late in December, the State Board of Education took favorable action on setting up priorities for new school buildings in proclaiming: "New and necessary school sites and classrooms must have first claim on funds made available by the school building amendment to the State Constitution of Florida. . . . Next in priority to classrooms are lunch rooms, libraries, shops, homemaking rooms, science rooms, and physical education facilities. Third comes re-usable classrooms and heating and placement of substandard equipment. Last are auditoriums, gymnasiums and other desirable but not absolutely essential facilities."—*M. Mitchell Ferguson.*

Teacher Supply. Concern over the number of young people who prepare for teaching but do not enter the profession has led the teacher-education institutions and the State Department of Education to launch a cooperative inquiry into the problem. Each institution in the State is making a survey of its 1951-52 graduates, who are qualified for certification, to locate any who are not teaching this year. An attempt will be made to determine from these people the reasons for their non-entry into the profession.

If the survey seems to indicate any common core of discouraging aspects of teaching in

Florida, it is hoped that remedial action can be taken. Leon N. Henderson, Professor of Education at the University of Florida, is coordinating the study.—*John R. Beery.*

ILLINOIS

Commission Notes. The Illinois TEPS Commission recently recommended the adoption of the following: (1) The nine points which were developed by the Illinois delegation at the 1952 Chicago regional conference; (2) continued efforts to improve the program of teacher selection, preparation, and certification, standards of professional conduct, and standards in the accrediting of teacher education in Illinois; (3) continued efforts to raise the salary levels of professionally qualified and experienced teachers to levels recommended by the National Education Association; (4) authorization to the Commission to continue its work during the coming year.—*Bertrand L. Smith.*

The National College of Education recently announced a ten-year program designed to produce more qualified teachers for the nation's elementary schools. In announcing the plan, President K. Richard Johnson outlined its three main goals: (1) A great-teacher program to attract outstanding teachers to the College; (2) a student scholarship fund to encourage more young men and women to enter the teaching profession; and (3) a building expansion program to enable the college to increase its capacity for educating teachers.—*Mary Kate Evans.*

KANSAS

News Notes. Two institutions in Kansas, the Pittsburg State Teachers College and the Municipal University of Wichita, have recently been visited by the AACTE. The cooperative plan being followed, in which representatives of the State Department of Public Instruction and the Kansas State Teachers Association are invited to participate in the visitation, is a distinct success. The work of the college is seen from three different points of view, and the guest agencies profit by becoming better acquainted with the work of the AACTE and the institution being visited.

One additional Kansas institution has filed application to be accredited by AACTE. If the institution is approved, this will increase the total Kansas AACTE membership to eight colleges and universities, in which 53 per cent of the teachers of Kansas are prepared.—*F. Floyd Herr.*

KENTUCKY

Four members of the Kentucky TEPS Commission are serving on an eight-member subcommittee to define the master's degree as a basis for issuing standard certificates for elementary and secondary teachers. This subcommittee was appointed by the Advisory Committee of the State Council on Public Higher Education.

In 1934, the certification law provided for the issuance of a Standard Certificate to those who had completed a four-year curriculum for teaching and the requirements for a master's degree. In 1936, the four state teachers colleges were authorized to offer a master's degree in education. The program for this degree has been improved over the years; the requirements for the Standard Certificate remain as they were, namely a master's degree. Certificates may be issued under this regulation to anyone who has a master's degree regardless of his graduate major.

The subcommittee has two major purposes: First, to suggest a fifth-year program which will point the teacher toward the job he has to do; and second, to suggest a certification regulation which will reflect the quality of preparation at the fifth-year level.—*W. J. Moore.*

MASSACHUSETTS

Curriculum Study. Periodically, the Massachusetts state teachers colleges, under the direction of the State Department of Education, reexamine their curricula with a view to making revisions to keep them abreast of modern developments and the changing needs and demands of the times.

In the fall of 1951, following an extensive study of present offerings in the several colleges, such a curriculum study of the professional programs was begun by a committee composed of directors of training of the colleges and training school principals. The committee was so constituted in order that the study would be made by faculty members who were in constant touch with the three groups affected by the quality of the teacher-education program—public school children, college students, and state school officials. It was expected that such a committee would know the needs of a teacher and would approach the problem practically and objectively.

The general theme of the study has been: What are the competencies which the beginning teacher should bring to his early teaching from his college preparation? What provision must be made in the college curriculum to develop these competencies? The committee has

taken nothing for granted in the way of present course content, but rather has tried to find the answers to these questions: (1) What are the objectives of a well-developed program of teacher education? (2) What are the characteristics of a good teacher as determined by the demands of the actual teaching situation? (3) What learnings and understandings must a teacher have as determined by the demands of the actual teaching situation? (4) What types of experience must be provided for a teacher as determined by the demands of the actual teaching situation?

The purpose of this study has been to develop a sequence of carefully considered learnings and experiences which must be included in well-developed programs of teacher education for the area contemplated. The ways in which these learnings and experiences will be included in the curricula of the several colleges is to be left to the individual institutions, thereby avoiding standardization and making provision for experimentation and recognition of local differences.

The uniqueness of the work has been that nothing has been taken for granted, including the traditional patterns of teacher education which have an old and honored history. All learnings and experiences included were tested in the light of their application to the actual teaching situation by a committee, all of the members of which are actively engaged in working with children as well as with student teachers.

The State Department of Education has prepared a bulletin entitled "Teaching Careers" which is supplementary to its regular bulletin of information on the state teachers colleges. The bulletin discusses the need for teachers, the challenge of the profession, advancement, compensation, employment conditions, and professional organizations. Copies have been distributed to superintendents of schools, high school principals, guidance counselors, and interested students.—*Patrick J. Sullivan.*

MICHIGAN

News Notes. Beginning with the 1952-53 fall semester, the University of Michigan School of Education instituted a combined program for the training of upper elementary and secondary school teachers. Those who complete this program will receive a certificate which authorizes the holder to teach in grades four through 12 in Michigan schools.

The program provides integrated courses in the social and psychological foundations of education and for organized experiences with children through their entire two years of professional study. During the senior year the student will do directed teaching one semester in the upper elementary grades and one semester in the secondary grades. Candidates also must take work, or show evidence of competence, in a number of special teaching fields such as music, physical education, speech, and arts and crafts.

Evaluation of Extern Program. A committee of 17 students, from the group of 130 juniors who participated in the Michigan State Normal College preschool, extern program last fall, is now engaged in an evaluation of that program. These students spent one week in a public school in the fall of 1952, previous to starting their professional education as teachers. Fifty-nine different school systems in five different states participated in the program. Currently the committee is preparing a questionnaire to attempt to ascertain the value of the school experience. During the remainder of the school year the committee plans to: (1) prepare a handbook to be used by participating juniors next fall in their work within the local schools; (2) orient the present sophomore class about the program as to its requirements and values; (3) secure from the superintendents, principals, and teachers of the participating schools their evaluations and criticisms of the program.—*Eugene B. Elliott.*

MINNESOTA

A teacher recruitment action program is underway in Minnesota under the auspices of a joint committee of the Minnesota Institutional Teacher Placement Association and the Minnesota Association of School Administrators. This committee (four superintendents of schools, four members from state educational institutions, and one from the State Department of Education) has inaugurated the action program through use of the following techniques. (1) A resolution has been sent to the U. S. Chamber of Commerce, and a letter to the Minnesota Editorial Association, asking for their assistance in encouraging qualified young people to enter the teaching profession. (2) The State School Board Association has been asked to use teacher recruitment as a discussion topic in its state convention. (3) A survey is being conducted to secure information concerning teacher recruitment action programs in other states. (4) School administrators, teachers, and the public in general are being requested to "preach the gospel" of recruitment necessity and to work through such organizations as the Minnesota Education Association, American Legion, parent-teacher organizations, American Association of University Women, the state principals' association, etc., to urge qualified young people to enter teacher educa-

tion. (5) The development of Future Teachers of America chapters in high school and improvement of the guidance programs, especially on the junior high school level, are being encouraged. (6) A survey is being made of the seniors in high schools of the State who choose teaching as a career, and a check is being made with the Minnesota Association of Colleges to see what information is available regarding the vocational choices of students tested. (7) An endorsement was given for the continuation of the Governor's State Conference on Teacher Recruitment.—*Harvey D. Jensen.*

The increased freshman enrollment for 1952 at the Moorhead State Teachers College is one hopeful evidence of some relief to the teacher shortage in Minnesota. The increase, 40 per cent in excess of the fall enrollment for the preceding year, is mainly in the Elementary Provisional Curriculum which now is being gradually extended to a minimum of four years. Students who enroll in this curriculum in the fall quarter will be required to complete eight quarters of work. Obviously the upgrading of requirements in the Minnesota state teachers colleges is affecting enrollments favorably rather than unfavorably. The total college enrollment which is greater than that of last year is undoubtedly the result of an active recruitment program.—*O. W. Snarr.*

MISSISSIPPI

News Notes. The colleges preparing teachers in Mississippi are watching with keen interest the action of the Recess Committee of the Mississippi Legislature, which is dealing with the problems of public education in Mississippi. According to some of the recommendations it appears probable that the distribution of state funds will be tied to teacher certification and that minimum salaries for teachers will be established on the basis of the certificates held. If these proposals become state laws, they will undoubtedly place a heavy demand upon colleges to provide new facilities in teacher education.—*Forrest W. Murphy.*

MONTANA

New Certification requirements. The State Board of Education at its December meeting passed the following recommendation which adds strength to the previous recommendations of the TEPS Committee of the Montana Education Association: "Increase in Requirements for Elementary Teacher Certificates; THAT, The State Board of Education recommends that the requirements for the Elementary Teacher Certificate be raised to three years of standard collegiate preparation by September 1956 and to the bachelor's degree level by 1959."

This recommendation, along with other school legislation proposed by the MEA, will go to the Legislature for action.—*James E. Short.*

Teacher Education and Supply. The various units of the Greater University of Montana which educate teachers have been holding conferences for the past few years in an endeavor to synchronize the various courses offered at each institution. The main object is to avoid unnecessary duplication of courses and provide for stronger preservice curricula for teachers on the elementary and secondary levels. It may soon be announced that prospective teachers, whether elementary or secondary, will be required to have four years of preparation by 1959.

Another innovation in the certification of teachers has been used for the past three years in Montana in securing teachers who do not have the required preparation for positions in the rural schools. During these years and at the present time, a teacher, in order to secure full certification, must have completed a minimum of two years of normal school preparation. Due to the shortage of teachers and to the fact that so many rural positions could not be filled, county committees were set up for the purpose of screening teachers for these positions. Each committee consisted of the county superintendent, three qualified employed teachers, one fully qualified district superintendent, and two school board members from other districts. To be recommended for county certification by the committee, candidates were required to have completed a minimum of one college year of preparation. The action of these committees was not effective until one week after school had begun in the fall, in order to give qualified teachers an opportunity to secure positions.

Those acquainted with the geography of Montana will be able to appreciate what is meant by rural, isolated schools and how difficult it is to secure teachers to work in these communities. In many localities, teachers are cut off from the outside world for the entire school year, and the conveniences of living are entirely lacking. Sometimes there are only two to ten pupils involved and community contacts are limited.

The above method of securing unqualified teachers certainly has not been recognized as a solution to the problem, but merely as a stopgap until the supply of teachers can more closely meet the demand. After three years of experience with the plan, it has been found that many of these substandard teachers con-

tinued their preparation and are now fully qualified and certified on the state level. Others did not make the grade and were weeded out after a year or less of experience.—*Mary M. Condon.*

At the close of the war, approximately 4,600 teachers were employed in the rural elementary and secondary schools of Montana. Of this group one out of three was teaching on a permit or emergency certificate. Since that time, 1,000 classroom units have been added in the State and the number of permit and emergency teachers has been reduced by about 1,000. Also, the retired teachers have been replaced with qualified teachers. While the total gain in the number of qualified teachers is about 2,000 out of 5,600, it has been necessary to replace a greater number of additional retired teachers because many of them, during the war, taught longer than they had planned and some who had retired went back to work.—*Martin P. Moe.*

NEBRASKA

The Council on Teacher Education has continued to work closely with the NSEA, PTA, and other groups in encouraging young people of outstanding ability to enter the teaching profession. Materials on teaching as a career have been sent to the high schools, and school administrators and guidance workers have been encouraged to give special attention to this problem. In cooperation with the Nebraska Curriculum Committee, the Council is proposing a high school course, entitled "Teaching As A Career." Other activities have resulted in improvements in college admissions on standards and procedures, especially with regard to the 12-hour college program.

The Council's suggested patterns for the preparation of elementary and secondary school teachers have been increasingly helpful in improving teacher-education programs. Its study of practices in supervised teaching has also influenced steady improvement in this area. During the past year its study of introductory courses in education has been helpful in making these courses more effective. The first phase of the study of offerings in Child Growth and Development and in Educational Psychology has been completed and the compilations will soon be distributed. This study will be continued through the next year. A statement of suggestions for a college course in Teacher Relationships has recently been distributed to Council members. It is hoped that many colleges will establish such a course as a part of their four-year programs.

The recommendations made by the Council after completion of its study governing off-campus and other types of extension work are being considered and tried out this year. The Council eventually expects to establish standards based upon its study and upon the experience of institutions in implementing the Council's recommendations.—*Leo P. Black.*

NEW HAMPSHIRE

The primary new development in New Hampshire's program for increasing the supply of competent teachers has been the establishment of the position of Director of Teacher Recruitment by the State Board of Education. The new Director will coordinate the activities of the two state teachers colleges and the efforts of the members of the staff of the Department of Education into a more unified and effective program for the recruitment of college students and former teachers, and encourage liberal arts graduates, with proper qualifications, to enroll in conversion programs. The teacher recruitment program is now giving special emphasis to interviewing parents of prospective teachers, as well as the establishment of future teacher associations in local high schools.

A second factor in the teacher recruitment program is the inclusion in teachers colleges' budgets of substantial scholarship aid to assist needy students who would not otherwise enter teacher education; $25,000 is allocated to the Keene Teachers College and $15,000 to the Plymouth Teachers College for this purpose.

A third factor is the development of a new building program at the teachers colleges which provides for a new 30-classroom and laboratory building, a men's dormitory, and vocational building at Keene and a new auditorium-gymnasium and a student union building at Plymouth.—*Hilton C. Buley.*

NEW JERSEY

Increasing Teacher Supply. New Jersey, like other states, is faced with a serious shortage of well-qualified teachers. Several steps have been taken to increase the supply of such teachers for the public schools of the State.

1. The State Board of Education and the Legislature have approved a plan for expanding and improving facilities in each of the six state teachers colleges. It is anticipated that the new facilities will enable the colleges to increase enrollments from approximately 4,000 to 5,500.

2. The State Teachers Colleges at Montclair and Trenton both prepare teachers for the secondary schools of the State. Because the demand for such teachers is limited at the present time, all students in these colleges who are majors in English, history, mathematics,

or science (or a combination thereof) are also required to take the minimum courses necessary for standard certification in the elementary grades. When the crest of postwar enrollments moves on to the secondary schools, many of these teachers with dual preparation will be reassigned to the secondary schools.

3. The State Board of Education recently authorized three liberal arts colleges, Fairleigh Dickinson College, Georgian Court College, and Upsala College, to confer the degree of Bachelor of Science in Elementary Education.

4. The State Board also recently approved a regulation making it possible for New Jersey state teachers colleges to accept transfer students from other colleges who wish to complete requirements for standard certification to teach in elementary grades one through eight. These students are eligible for standard certification upon satisfactory completion of certain requirements.—*S. David Winans.*

NEW MEXICO

Revision of Certification Requirements. The New Mexico TEPS Commission is now in the midst of a statewide study of the problems of certification. A number of local workshops are in progress, the purpose of which is to study present certification requirements, identify weaknesses, and make recommendations for needed changes.

The Commission is planning a state conference to be held in El Rito, July 20-22, 1953. Representatives from all sections of the State will study the recommendations made by the workshop groups. It is hoped that definite conclusions will be reached and recommendations of new certification requirements made to the State Board of Education.—*Vernon R. Mills.*

NORTH DAKOTA

Minot State Teachers College is preparing a bulletin, entitled "The Education of a Teacher," which will deal with the qualifications, possibilities for and education of teachers. The bulletin will be distributed to high school administrators who have requested materials to assist them in directing high school youth into teacher-education institutions.

Jamestown College has received a grant of $20,000 from the Committee on Self-Studies of the Fund for the Advancement of Education for the stipulated purpose of conducting a self-analysis. One of the four general areas to be examined is that of the experience of alumni. Inasmuch as many Jamestown graduates have entered the teaching profession, the College hopes to obtain comments and suggestions which will prove of great value in the selection and guidance of potential teachers.—*Samuel S. George.*

OHIO

How To Secure Competent Teachers for Your Community was the theme of the Fourth Annual Teacher Education Workshop, sponsored by the Ohio TEPS Commission, on December 5-6, at Columbus. Group discussion topics included: salaries, selective recruitment programs, working conditions, professional standards of certification, and community surveys to identify former teachers. R. M. Eyman of the State Department of Education and Ralph McDonald, President of Bowling Green State University, were featured speakers.—*B. I. Griffith.*

OREGON

Anderson Survey. The survey of teacher-education institutions in Oregon, authorized by the Legislature and conducted by Earl W. Anderson of The Ohio State University, has been completed. The preliminary report made three major recommendations: (1) Secondary teacher education should be added to the curricula of the three colleges of education and elementary teacher education to the curricula of the state university and the state college; (2) liberal arts degrees should be added to the curricula of the state colleges of education, but limited to fields of humanities, social science, and mathematics; and (3) a four-year undergraduate program of elementary and secondary teacher education should be given at Portland State College, an extension division of the other state colleges. (See report below for action taken upon these recommendations.)

Oregon is one of the few states which allocates elementary and secondary teacher education to different schools. The General Extension Division of the state colleges, which has been moved from Eugene to Portland, offers opportunity for classroom work, correspondence work, and extension classes throughout the State. This school is not a college in the usual sense of the word, since it offers only courses which are being given in the teacher-education institutions or the two state colleges, and confers no degrees. The need for such an institution in Portland was manifested this year when the original enrollment was almost double that which was expected.—*Dick Sorick.*

The preliminary report of the survey of Oregon's teacher-education program was presented to the State Board of Higher Education last December. Meeting in special session in January 1953, the Board took favorable action on the following recommendations: (1) Unanimously approved the recommendation that all five state schools of higher education offer

teacher education on the elementary and secondary levels; (2) approved the recommendation that Portland State College be authorized to offer teacher education up to the last quarter of work in a four-year program, the last quarter to be completed at one of the five major state institutions which grant the bachelor's degree in education.

The Board also outlined a policy which, over a period of time, is expected to expand the teacher-education program at the Portland State College. The proposed plans call for gradual improvement of existing facilities in Portland, the addition of a new building, and degree-granting status in general studies but in no professional fields other than teacher education. These proposals must be authorized by the Legislature.

The survey opens the way for unified elementary-secondary teacher education at all state institutions. Implications of the report and subsequent action by the State Board of Higher Education extend far beyond the field of teacher education. However, major results of the survey for the present lie in the field of teacher education. This program will be considerably broadened in an effort to find an adequate supply of teachers for Oregon's booming school enrollments.—*Richard H. Barss.*

News Notes. A number of major changes in teacher education have occurred in Oregon during the past year. First, and of greatest importance, has been the allocation and granting of fifth-year, or master's degree work, for elementary school teachers in the three state colleges of education located at Ashland, La Grande, and Monmouth. This program went into partial effect during the 1952 summer session. The entire program will be given during the 1953 summer session. The fifth-year program is to be primarily a summer quarter offering until the need requires it to be offered during the academic year.

At Southern Oregon College of Education several worthwhile developments have taken place during the year. (1) The 200-service-hour program has been improved. Most of the students in teacher education now spend a minimum of 200 hours in work with juvenile groups and youngsters before being permitted to enter supervised teaching. (2) Groups of cadet teachers now are being sent to various communities in the region where a college supervisor and the supervising teachers direct an all-day, all-quarter teaching experience and teach theory courses which are integrated with the classroom instruction.—*Elmo N. Stevenson.*

VERMONT

The University of Vermont is improving its program for prospective elementary school teachers with the expectation that the new program will not only attract more college students into elementary teacher education but also will enrich the program for those students who have already elected elementary education. The curriculum revision now taking place will: (1) expand the foundation in general education; (2) improve orientation; (3) consolidate methods courses into fewer and better integrated units; (4) provide a more realistic student teaching experience; and (5) allow for the election of an academic minor to fit the interests of each student. Experiences in the senior year will introduce students to the challenge of active participation in professional education associations and active participation as citizens in the community. The University of Vermont has a summer session conversion program which provides a "retread" in elementary education for graduates in secondary education and for other degree holders. —*Thomas C. King.*

VIRGINIA

Recruitment Committees. During the past year the Virginia TEPS Commission, headed by Dean Lindley J. Stiles of the University of Virginia School of Education, has been working on the problem of teacher supply and the various factors which have made the situation critical.

In order to approach this important problem from a somewhat different angle, a statewide committee on the recruitment of teachers (composed of representatives from the Departments of Elementary Principals, Secondary Principals, and Superintendents) was appointed by the Virginia Education Association. Presidents G. Tyler Miller of Madison College and Dabney S. Lancaster of Longwood College were invited to meet with this group as were members of the State Department of Education. J. L. Blair Buck, Coordinator of Teacher Education, represented the State Department of Education.

At its first meeting, the group voted to request the Secondary Principals, in cooperation with other groups, to do everything possible to see that chapters of Future Teachers of America were established in every high school in the State, and that these groups be active in a statewide effort to interest young people in the teaching profession.—*Dabney S. Lancaster.*